# GSM GATEWAY ETS - 16G

# USER'S MANUAL

SHENZHEN ETROSS TELECOM CO.,LTD

1st version 2013

# Table of Contents

**1, Introduction.....4**
1.1 Overview.....4
1.2 Main Features.....4
1.3 Specifications.....4
1.4 Product appearance.....5
1.5 Call termination diagram.....7
1.6 Packing list.....8
**2, Quick installation guide.....9**
2.1 SIM card installation.....9
2.2 Antenna installation.....9
2.3 Network cable connection.....10
2.4 Power cable connection.....10
**3, Network Configuration.....11**
3.1 IVR method configuration.....11
3.2 LAN port method configuration.....11
**4, Web Configuration.....13**
4.1 Web configuration.....13
4.1.1 Access the Web configuration page through HTTP.....13
4.1.2 Web Configuration.....13
4.2 Status.....14
4.2.1 System Information/Network information/Port information.....14
4.2.2 Trunk Information.....16
4.2.3 BCCH.....16
4.3 Call history.....17
4.3.1 IP to GSM history.....17
4.3.2 GSM to IP history.....18
4.3.3 CDR.....19
4.3.4 Clear history.....20
4.4 Port.....21
4.4.1 Port setting.....21
4.4.2 Batch Port setting.....22
4.5 Trunk.....23
4.5.1 Trunk setting.....23
4.5.2 Batch trunk setting.....24
4.6 USSD.....26
4.7 Send SMS.....27
4.8 Receive SMS.....29
4.9 Balance Manage.....30
4.9.1 Call Balance manage.....30
4.9.2 balance auto calculate.....30

4.10 Call routing.....32
4.11 System.....33
4.11.1 system configuration.....33
4.11.2 Backup &restore.....35
4.11.3 Reset &reboot.....35
4.11.4 Upgrade firmware.....35
4.11.5 Upload IVR.....35
4.11.6 Username & Password.....36
4.12 Tools.....36
4.12.1 Ping test.....36
4.12.2 Tracert test.....36
4.12.3 Port power manage.....37
4.12.4 Change IMEI.....38
4.12.5 Debug.....39
**5, Glossary.....39**

# 1. Introduction

## 1.1 Overview

GSM VoIP gateway ETS-16G is newly designed IP to GSM gateway supporting maximum 16 ports of GSM Voice interface, it can effectively realize the smooth transition between PLMN(GSM) and VoIP network. Compact cost effective design and system architecture of ETS-16G provides customer satisfaction in high quality , performance and system reliance.

This product uses the state-of-art technology voice compression and Smart QoS of ETS to maintain the maximum voice quality under fast internet line and slow internet line as well, thus It is an ideal gateway for heavy duty VoIP call termination (VoIP to GSM) and Origination (GSM to VoIP), it is fully compatible with leading soft switch and SIP server. .

## 1.2 Main features

Support 16 GSM ports, up to 16 concurrent calls
GSM: Quad-band 850/900/1800/1900Mhz
CDMA: 450/ 800/ 1900Mhz optional
3G/UMTS: 850/900/2100Mhz optional
Web- based SMS Sending /receiving
Sys log out put by USB interface for tracking records
Voice prompts
HTTP Web support for configuration and upgrade
SIM swapping
HTTP Web support ASR, ACD, PDD, SIM balance check
Call routing / digit map
CDR management
IVR management
BCCH management
Auto IMEI generation and change, Automatically SIM card activation, credit check/ recharge
Advanced Simulation of human behavior for calling and messaging

## 1.3 Specifications

Interfaces

- Mobile Ports: 16 ports GSM/CDMA channels
- Two(2) 10/100Mbps Ethernet Interface (2xRJ45)
- USB: 1 port

Voice Processing

- Voice Codec: G.711a/u law, G.723.1, G726,G.729AB
- QoS: Diff Serve, T oS, VAD, PLC, CNG

Call Features

- Calling Type: Terminate/Originate calls
- IVR Voice Prompt: Two stage dialing, Customized IVR
- Call handling: One stage dialing, Configurable dial plan
- DTMF: RFC2833, SIP

Mobile Features

- General Feature: SMS, USSD, IMEI/PIN modify, Call minutes restriction, Carrier select, BCCH, Reversal Polarity Network
- Network Mode: NAT router or switch mode
- Network Protocols: IP,TCP, UDP,TFTP, FTP, RTP, RTCP, ARP, RARP,ICMP Ping, NTP, SNTP, HTTP, DNS, PPPoE, DHCP
- NAT traversal: Static NAT, STUN

Protocol

- Protocol: SIP V2.0 RFC3261
- SIP Characteristics: By port/device registration, Two183 mode

Configuration Management

- Management: TFTP, HTTP, Sys log, CDR
- Web GUI: Configuration, firmware upgrade, call status, CDR ,Configuration backup/restore

Hardware Specifications

- Power Supply:AC100~240V 50/60HZ DC12V/1A
- Temperature: 0~40 ℃（Operation）, -20~80 ℃（storage）
- Humidity: 5%～90% RH,
- Power Consumption: 35W
- Dimensions: 440(W) x 307(D) x 44(H) mm
- Net weight: 4.5kg

## 1.4 Product appearance

Figure 1-4-1 the photos of GSM Gateway ETS-16G

| | | |
|---|---|---|
| | | |
| Side view photo | Top view photo | Side view photo |

Figure 1-4-2 Top View of GSM Gateway ETS-16G

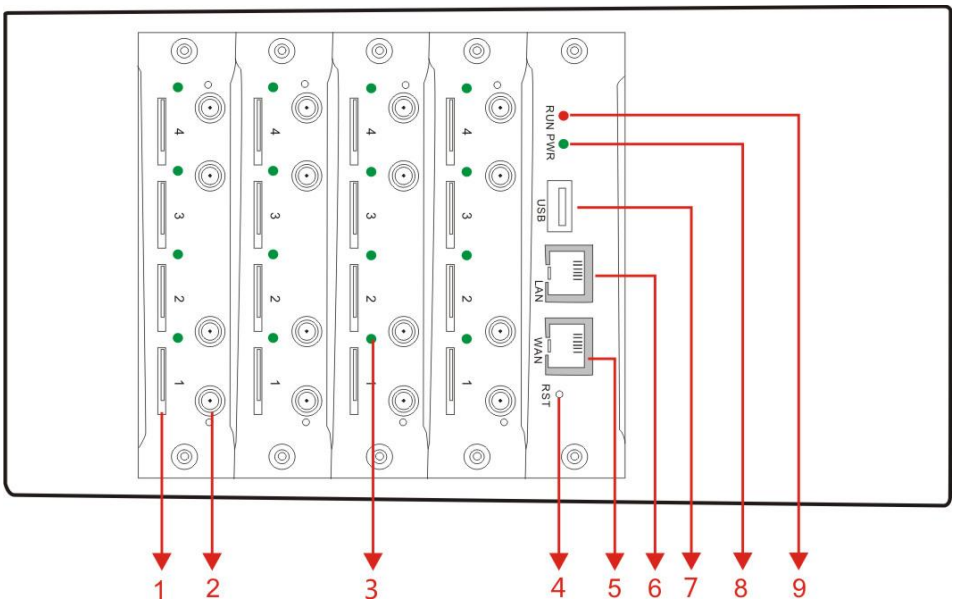



Table 1-4-1 Description of the top view

| No. | Sign / item | Description |
|---|---|---|
| 1 | SIM card | SIM card holder to insert SIM card inside |
| 2 | SMA | SMA connector to connect with Antenna |
| 3 | Green LED | To display the sim card status |
| 4 | RST | To restore to factory setting |
| 5 | WAN | Ethernet Interface,10/100M Base-TX, RJ-45 to connect with external network |
| 6 | LAN | Local area network, to connect with internal network |
| 7 | USB | USB interface for connecting with PC for syslog |
| 8 | PWR | To indicate the status of the power connection |
| 9 | RUN | To indicate the status of the device |

Figure 1-4-3 Side view of GSM Gateway ETS-16G

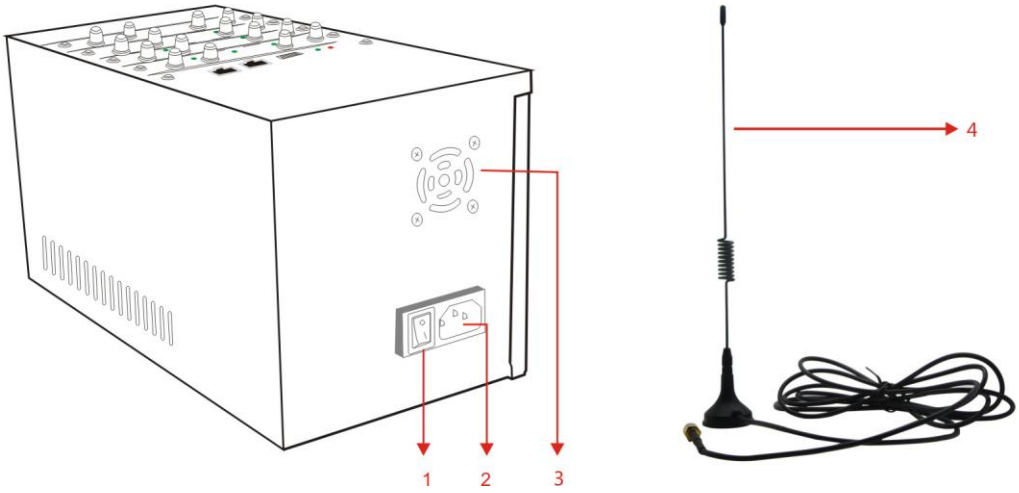
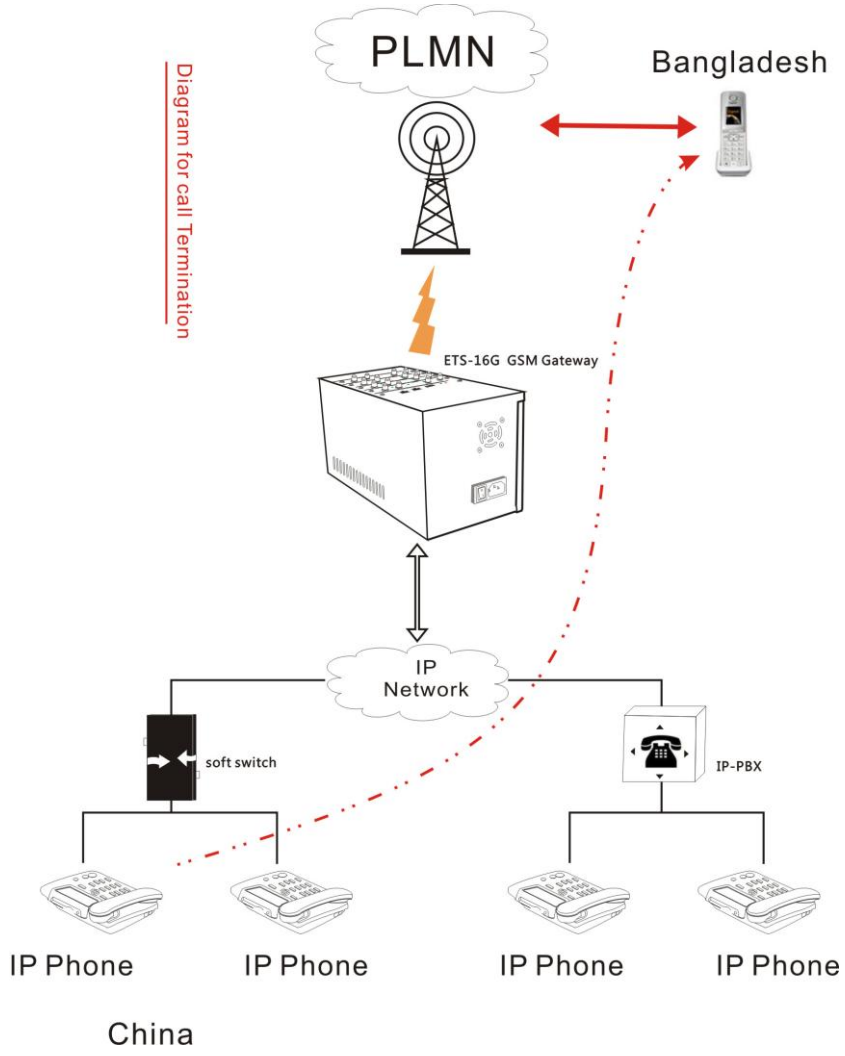



Table 1-4-2 Description of the top view

| No. | item | Description |
|---|---|---|
| 1 | Power switch | To switch on and off the device |
| 2 | AC Power | 110-240 VAC ,50/60Hz |
| 3 | Fan | Small fan to lower the heat of the device |
| 4 | Antenna | Standard 3m cable Antenna,Gain 3 dbi , short plastic antenna optional But it may make interference noise, not recommended. |

## 1.5 Call termination diagram

Figure 1-5-1 Call termination diagram




## 1.6 Packing list

| Item | Photo | Quantity (piece) |
|---|---|---|
| GSM Gateway ETS-16G host | | 1 |
| Antenna(3m cable antenna) | | 16 |
| AC power cable | | 1 |

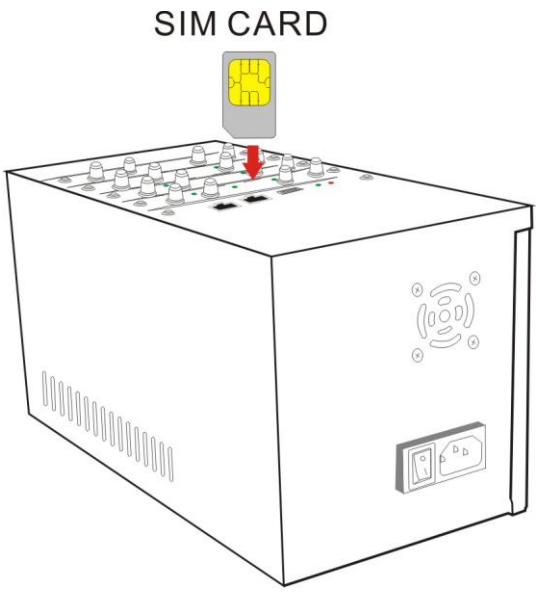
| | | |
|---|---|---|
| USB cable | | 1 |
| Network cable | | 2 |
| | | |
| Weight (Kg) | 5.0kg full set | |
| Size (L x W x H) cm | 33x25x23 (outer packing box) | |

# 2. Quick Installation Guide

## 2.1 SIM card installation

Install SIM card into each SIM card slot, attention the direction of SIM card inserting, ETS-16G supports SIM card swapping, but not recommended.( If you want to change SIM card, strongly recommend you to turn the port off from web configuration page then to change SIM card )

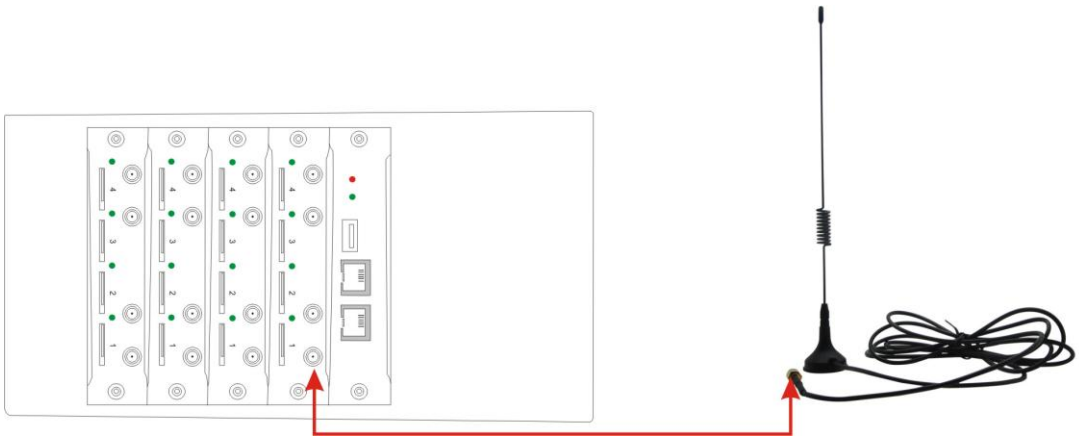
Figure 2-1-1 SIM Card installation




## 2.2 Antenna installation

Install Antenna with 3m cable, and put the antenna at least 1m far away from the device, otherwise it may make interference. Not recommend the short plastic antenna, if customer wants to use short antenna, it may make interference and noise and lower the efficiency of the device.

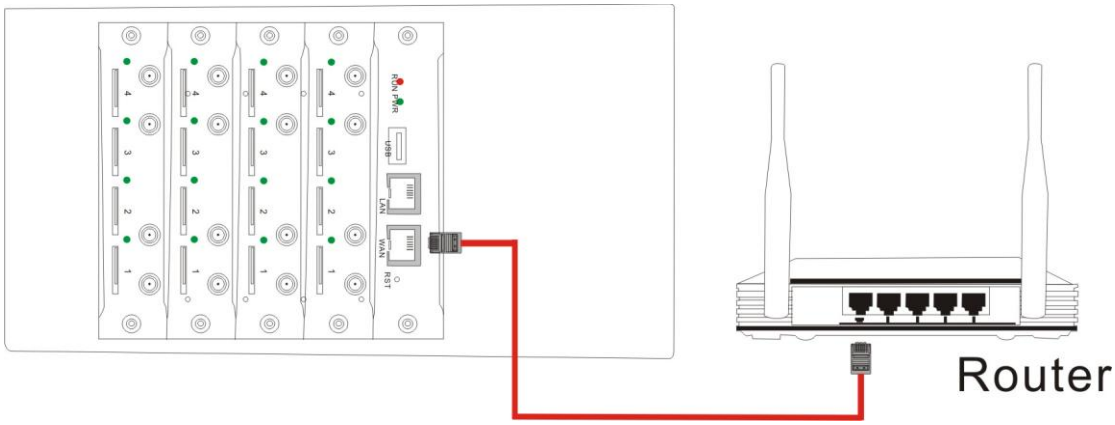
Figure 2-2-1 Antenna installation



## 2.3 Network cable connection of ETS-16G

Be sure to connect the WAN port of ETS-16G to the router / switch of external network.

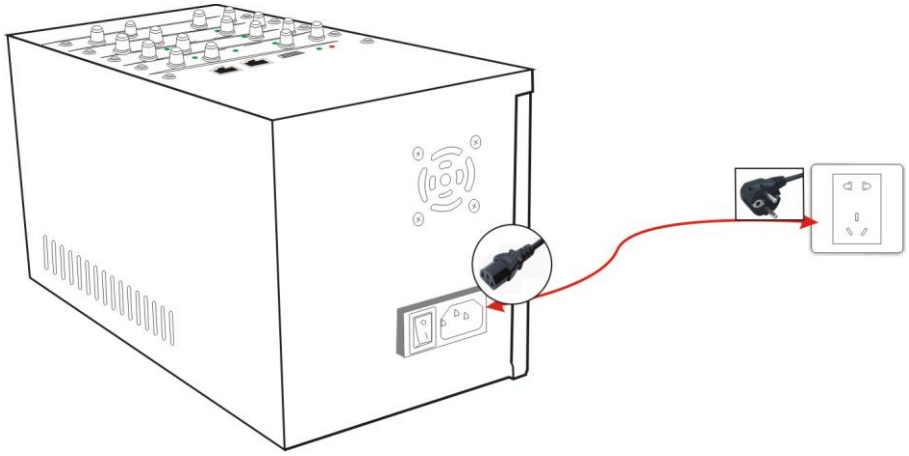
Figure 2-3-1 Network cable connection of ETS-16G




## 2.4 Power cable connection of ETS-16G

Connect power cable to the device, and switch on the device ,then it works. We provide US type, EU type, UK type ac power for optional.

Figure 2-4-1 Power cable connection of ETS-16G



# 3. Network Configuration

ETS provide two methods for you to enter into web configuration page.

3.1, IVR method configuration

Connect router's cable to WAN port of ETS-16G, insert SIM card to SIM 1, connect Antenna for Port 1,then switch on the device. Wait 1 minutes later, the device will fully startup.

Then you can call the number of SIM1 which you inserted to the ETS-16G, then your phone will prompt you to input the code, input *****01# , you will hear the voice for WAN Port IP address and LAN port IP address accordingly.

3.2,LAN port method configuration

Connect PC to LAN port of ETS-16G,set your PC to automatically obtain IP address. Check the IP address information, you will get the LAN port IP address And its default gateway IP address. See as below:

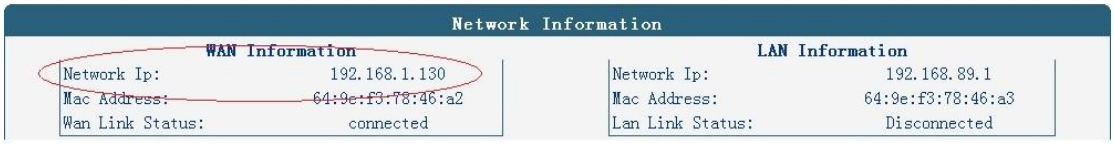
Figure 3-2-1 LAN & Default gateway IP address

Then you input the default gateway IP address "192.168.89.1" in the browser, it will enter into the Web configuration page, and input Login id: admin, password: admin

Figure 3-2-2 enter into Web configuration through LAN port

Then you will enter into the Web configuration page through LAN port, you will find the WAN port IP address as shown below:

Figure 3-2-3 Show Network information




1.3, Enter into Web Configuration Page

After you obtain the WAN IP address, then you can input WAN IP Address of ETS-16G in browser to enter into Web Configuration page.

# 4 Web Configuration

Before you do the Web configuration, strongly recommend you use the Explorer (Google Chrome, or Microsoft IE9.0 or above).

## 4.1 Web Configuration

### 4.1.1 Access the Web configuration page through HTTP

Enter WAN IP address of ETS-16G in browser, the GUI shows as below:

Figure 4-1-1 Web configuration interface

Enter Login ID: "admin" and password: "admin" and then click "login" in configuration interface. The default login and password are "admin/admin". It is strongly recommended, change the default password to a new password for system security.

### 4.1.2 Web Configuration

ETS-16G administration interface consists of the navigation tree and the detail configuration interfaces.

Go through navigation tree, user can check, view, modify, and set the device configuration on the right of configuration interface. Currently We have listed "Status" ,"Call history","Port",

"Trunk","USSD" ,"Send SMS", "Receive SMS","Balance Manage", "call routing", "System", "Tools" Columns, and We may upgrade for new features according to special requirements.

Figure 4-1-2 ETS administration interface

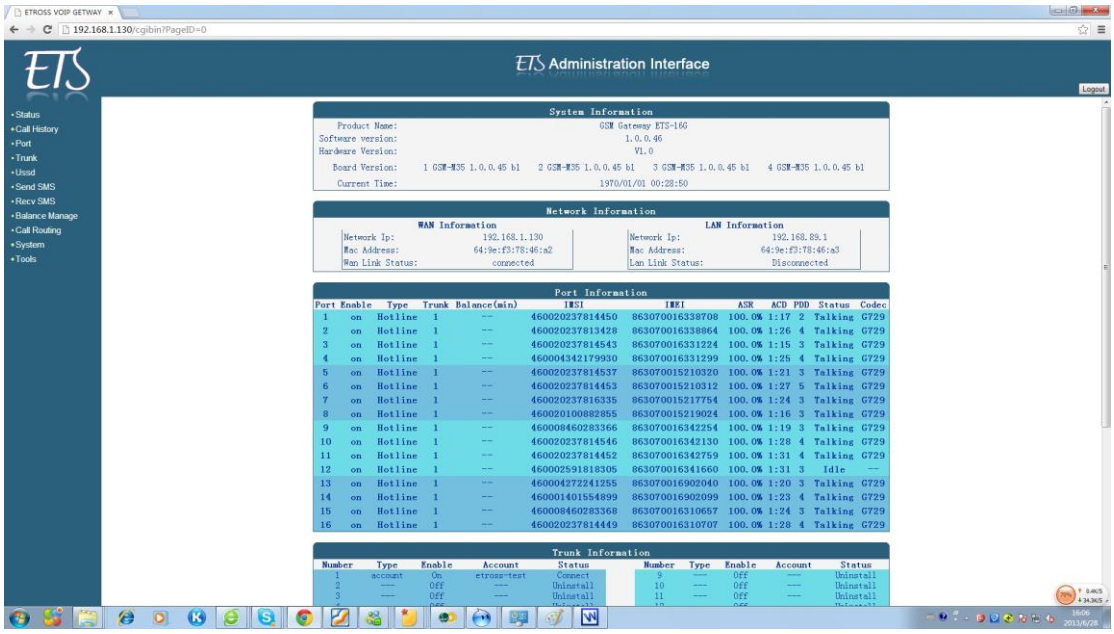

ETS Administration Interface
Logout
Status
Call History
Port
Trunk
Ussd
Send SMS
Recv SMS
Balance Manage
Call Routing
System
Tools
System Information
Product Name: GSM Gateway ETS-16G
Software version: 1.0.0.46
Hardware Version: V1.0
Board Version: 1 GSM-M35 1.0.0.45 b1 2 GSM-M35 1.0.0.45 b1 3 GSM-M35 1.0.0.45 b1 4 GSM-M35 1.0.0.45 b1
Current Time: 1970/01/01 00:28:50
Network Information
WAN Information
Network Ip: 192.168.1.130
Mac Address: 64:9e:f3:78:46:a2
Wan Link Status: connected
LAN Information
Network Ip: 192.168.89.1
Mac Address: 64:9e:f3:78:46:a3
Lan Link Status: Disconnected
Port Information
Port Enable Type Trunk Balance(min) IMSI IMEI ASR ACD PDD Status Codec
1 on Hotline 1 --- 460020237814450 863070016338708 100.0% 1:17 2 Talking G729
2 on Hotline 1 --- 460020237813428 863070016338864 100.0% 1:26 4 Talking G729
3 on Hotline 1 --- 460020237814543 863070016331224 100.0% 1:15 3 Talking G729
4 on Hotline 1 --- 460004342179930 863070016331299 100.0% 1:25 4 Talking G729
5 on Hotline 1 --- 460020237814537 863070015210320 100.0% 1:21 3 Talking G729
6 on Hotline 1 --- 460020237814453 863070015210312 100.0% 1:27 5 Talking G729
7 on Hotline 1 --- 460020237816335 863070015217754 100.0% 1:24 3 Talking G729
8 on Hotline 1 --- 460020100882855 863070015219024 100.0% 1:16 3 Talking G729
9 on Hotline 1 --- 460008460283366 863070016342254 100.0% 1:19 3 Talking G729
10 on Hotline 1 --- 460020237814546 863070016342130 100.0% 1:28 4 Talking G729
11 on Hotline 1 --- 460020237814452 863070016342759 100.0% 1:31 4 Talking G729
12 on Hotline 1 --- 460002591818305 863070016341660 100.0% 1:31 3 Idle ---
13 on Hotline 1 --- 460004272241255 863070016902040 100.0% 1:20 3 Talking G729
14 on Hotline 1 --- 460001401554899 863070016902099 100.0% 1:23 4 Talking G729
15 on Hotline 1 --- 460008460283368 863070016310657 100.0% 1:24 3 Talking G729
16 on Hotline 1 --- 460020237814449 863070016310707 100.0% 1:28 4 Talking G729
Trunk Information
Number Type Enable Account Status Number Type Enable Account Status
1 account On etross-test Connect 9 --- Off --- Uninstall
2 --- Off --- Uninstall 10 --- Off --- Uninstall
3 --- Off --- Uninstall 11 --- Off --- Uninstall

Table 4.1.1 Description of the Web configuration columns

| | |
|---|---|
| Status | Shows the device current run situation and lists parameters |
| Call history | Shows IP to GSM,GSM to IP calls,duration,success and failure statistic |
| Port | Numbers of GSM/CDMA channels |
| Trunk | Add remote IP of soft switch, SIP server which will send call traffics to gateway. |
| USSD | USSD (Unstructured Supplementary Service Data) is a Global System for Mobile(GSM) communication technology that is used to send text between a mobile phone and an application program in the network. |
| Send SMS | To send SMS |
| Receive SMS | To receive SMS |
| Balance manage | Shows SIM balance duration, to set the balance and unit and auto balance calculation management |
| Call routing | To pre-define some digit map /call rules to realize the call routing |
| System | System instruction and setting |
| Tools | Useful tools |

## 4.2 Status

### 4.2.1 System Information/Network information/Port information

System information shows product's name,software version and hardware version etc.

Network Information shows WAN and LAN network IP address, Mac Address and also the link status.

Port information shows the port basic information and working status.

Figure 4-2-1-1 system /Network /Port information

**System Information**

| | | | | |
|---|---|---|---|---|
| Product Name: | GSM Gateway ETS-16G | | | |
| Software version: | 1.0.0.46 | | | |
| Hardware Version: | V1.0 | | | |
| Board Version: | 1 GSM-M35 1.0.0.45 b1 | 2 GSM-M35 1.0.0.45 b1 | 3 GSM-M35 1.0.0.45 b1 | 4 GSM-M35 1.0.0.45 b1 |
| Current Time: | 1970/01/01 00:25:42 | | | |

**Network Information**

| WAN Information | | LAN Information | |
|---|---|---|---|
| Network Ip: | 192.168.1.130 | Network Ip: | 192.168.89.1 |
| Mac Address: | 64:9ef3:78:46:a2 | Mac Address: | 64:9ef3:78:46:a3 |
| Wan Link Status: | connected | Lan Link Status: | Disconnected |

**Port Information**

| Port | Enable | Type | Trunk | Balance(min) | IMSI | IMEI | ASR | ACD | PDD | Status | Codec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | on | Hotline | 1 | -- | 460020237814450 | 863070016338708 | 100.0% | 1:15 | 3 | Talking | G729 |
| 2 | on | Hotline | 1 | -- | 460020237813428 | 863070016338864 | 100.0% | 1:23 | 3 | Talking | G729 |
| 3 | on | Hotline | 1 | -- | 460020237814543 | 863070016331224 | 100.0% | 1:13 | 4 | Talking | G729 |
| 4 | on | Hotline | 1 | -- | 460004342179930 | 863070016331299 | 100.0% | 1:24 | 3 | Talking | G729 |
| 5 | on | Hotline | 1 | -- | 460020237814537 | 863070015210320 | 100.0% | 1:20 | 4 | Talking | G729 |
| 6 | on | Hotline | 1 | -- | 460020237814453 | 863070015210312 | 100.0% | 1:27 | 4 | Talking | G729 |
| 7 | on | Hotline | 1 | -- | 460020237816335 | 863070015217754 | 100.0% | 1:27 | 3 | Talking | G729 |
| 8 | on | Hotline | 1 | -- | 460020100882855 | 863070015219024 | 100.0% | 1:15 | 4 | Talking | G729 |
| 9 | on | Hotline | 1 | -- | 460008460283366 | 863070016342254 | 100.0% | 1:18 | 4 | Idle | -- |
| 10 | on | Hotline | 1 | -- | 460020237814546 | 863070016342130 | 100.0% | 1:28 | 4 | Talking | G729 |
| 11 | on | Hotline | 1 | -- | 460020237814452 | 863070016342759 | 100.0% | 1:31 | 3 | Talking | G729 |
| 12 | on | Hotline | 1 | -- | 460002591818305 | 863070016341660 | 100.0% | 1:32 | 3 | Talking | G729 |
| 13 | on | Hotline | 1 | -- | 460004272241255 | 863070016902040 | 100.0% | 1:19 | 4 | Talking | G729 |
| 14 | on | Hotline | 1 | -- | 460001401554899 | 863070016902099 | 100.0% | 1:22 | 4 | Talking | G729 |
| 15 | on | Hotline | 1 | -- | 460008460283368 | 863070016310657 | 100.0% | 1:24 | 4 | Talking | G729 |
| 16 | on | Hotline | 1 | -- | 460020237814449 | 863070016310707 | 100.0% | 1:25 | 6 | Talking | G729 |

Table 4-2-1-1 Description of system/Network/Port Information

| | |
|---|---|
| Product name | GSM Gateway ETS-16G |
| Software version | Indicates the firmware version |
| Hardware version | Indicates the hardware version |
| Board Version | Indicates the GSM board version |
| Current time | If connect with external network, it will show the system time |
| WAN | WAN (Wide Area Network) port information |
| LAN | LAN (Local Area Network) port Information |
| Mac Address | Displays the current MAC of the gateway (WAN port and LAN port) |
| Wan/Lan link status | Displays Wan/Lan port connect status (connected /Disconnected) |
| Port | Numbers of GSM/CDMA ports . |
| Enable | Enable displays the status of port (On or Off) |
| Type | Display answer type (hotline or IVR) when call in |
| Trunk | Add remote IP of soft switch, SIP server (like VOS) which will send call traffics to gateway |
| Balance (min) | Shows the balance (minutes) if we set the balance management, And if we open this option, it will show the remaining call minutes, when the call minute is "0", it will close the port (the port is off) |
| IMSI | International Mobile Subscriber Identity, it is the uniquely identifies of SIM card |
| IMEI | International Mobile Equipment Identity, it is the uniquely identifies of the module |
| ASR | Answer Seizure Ratio is a measure of network quality . Its calculated by |

| | |
|---|---|
| | taking the number of successfully answered calls and dividing by the total number of calls attempted. Since busy signals and other rejections by the called number count as call failures, the ASR value can vary depending on user behavior. |
| ACD | The Average Call Duration (ACD) is calculated by taking the sum of billable seconds (bill sec) of answered calls and dividing it by the number of these answered calls. |
| PDD | Post Dial Delay (PDD) is experienced by the originating customer as the time from the sending of the final dialed digit to the point at which they hear ring tone or other in-band information. Where the originating network is required to play an announcement before completing the call then this definition of PDD excludes the duration of such announcements |
| Status | shows the port's status: idle, talking, dialing,booting,no card,error. |
| Codec | Shows the current codec of the SIP voice, generally ETS-16G supports G.711a/u law, G.723.1, G726,G.729AB |

### 4.2.2 Trunk Information

Trunk information shows the IP trunk quantity and status.

Figure 4-2-2-1 Trunk Information

Trunk Information

| Number | Type | Enable | Account | Status | Number | Type | Enable | Account | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1 | account | On | etross-test-2 | Connect | 9 | --- | Off | --- | Uninstall |
| 2 | --- | Off | --- | Uninstall | 10 | --- | Off | --- | Uninstall |
| 3 | --- | Off | --- | Uninstall | 11 | --- | Off | --- | Uninstall |
| 4 | --- | Off | --- | Uninstall | 12 | --- | Off | --- | Uninstall |
| 5 | --- | Off | --- | Uninstall | 13 | --- | Off | --- | Uninstall |
| 6 | --- | Off | --- | Uninstall | 14 | --- | Off | --- | Uninstall |
| 7 | --- | Off | --- | Uninstall | 15 | --- | Off | --- | Uninstall |
| 8 | --- | Off | --- | Uninstall | 16 | --- | Off | --- | Uninstall |

Table 4-2-2-1 Description of Trunk Information

| | |
|---|---|
| Trunk information | Displays the IP trunk quantity, type,and status |
| Number | Index of the IP trunk, you can add 1 piece trunk or maximum 16 pieces |
| Type | Displays the IP trunk type (account /peer optional) |
| Enable | Displays the IP trunk on/off |
| Account | Trunk account name |
| Status | Displays trunk connection status, connect / uninstall optional |

### 4.2.3 BCCH

The Broadcast Control Channel (BCCH) is a logical broadcast channel used by the base station in a GSM network to send information about the identity of the network. This information is used by a mobile station to get access to the network.

This information includes the Mobile Network Code (MNC), the Location Area Code (LAC) and a list of frequencies used by the neighboring cells (BA: BCCH Allocation List).

Figure 4-2-3-1 BCCH

BCCH

| Port | 0 Bcch | 0 LAC | 0 dbm | 1 Bcch | 1 LAC | 1 dbm | 2 Bcch | 2 LAC | 2 dbm | 3 Bcch | 3 LAC | 3 dbm | 4 Bcch | 4 LAC | 4 dbm | 5 Bcch | 5 LAC | 5 dbm | 6 Bcch | 6 LAC | 6 dbm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 592 | 0x9b1 | -69 | 76 | 0x9b1 | -63 | 62 | 0x9b1 | -72 | 68 | 0x9b1 | -73 | 64 | 0x9b1 | -73 | 82 | 0x9b1 | -76 | 560 | 0x9b1 | -77 |
| 2 | 578 | 0x9b1 | -63 | 78 | 0x9b1 | -62 | 76 | 0x9b1 | -67 | 64 | 0x9b1 | -77 | 62 | 0x9b1 | -77 | 790 | 0x9b1 | -78 | 574 | 0x9b1 | -81 |
| 3 | 578 | 0x9b1 | -62 | 78 | 0x9b1 | -53 | 76 | 0x9b1 | -55 | 68 | 0x9b1 | -68 | 62 | 0x9b1 | -68 | 66 | 0x9b1 | -72 | - | - | - |
| 4 | 578 | 0x9b1 | -51 | 78 | 0x9b1 | -50 | 76 | 0x9b1 | -64 | 68 | 0x9b1 | -69 | 62 | 0x9b1 | -71 | 790 | 0x9b1 | -73 | 64 | 0x9b1 | -74 |
| 5 | 578 | 0x9b1 | -54 | 78 | 0x9b1 | -53 | 76 | 0x9b1 | -66 | 790 | 0x9b1 | -68 | 62 | 0x9b1 | -75 | 68 | 0x9b1 | -79 | 574 | 0x9b1 | -79 |
| 6 | 578 | 0x9b1 | -52 | 78 | 0x9b1 | -52 | 62 | 0x9b1 | -68 | 64 | 0x9b1 | -72 | 68 | 0x9b1 | -75 | 790 | 0x9b1 | -75 | 574 | 0x9b1 | -76 |
| 7 | 578 | 0x9b1 | -51 | 78 | 0x9b1 | -52 | 76 | 0x9b1 | -62 | 790 | 0x9b1 | -69 | 62 | 0x9b1 | -73 | 68 | 0x9b1 | -73 | 560 | 0x9b1 | -79 |
| 8 | 578 | 0x9b1 | -54 | 78 | 0x9b1 | -51 | 76 | 0x9b1 | -60 | 68 | 0x9b1 | -68 | 62 | 0x9b1 | -75 | 562 | 0x9b1 | -77 | 66 | 0x9b1 | -78 |
| 9 | 78 | 0x9b1 | -51 | 578 | 0x9b1 | -59 | 76 | 0x9b1 | -62 | 790 | 0x9b1 | -72 | 68 | 0x9b1 | -75 | 62 | 0x9b1 | -75 | 82 | 0x9b1 | -77 |
| 10 | 578 | 0x9b1 | -55 | 78 | 0x9b1 | -61 | 76 | 0x9b1 | -65 | 62 | 0x9b1 | -71 | 64 | 0x9b1 | -72 | 574 | 0x9b1 | -74 | 570 | 0x9b1 | -75 |
| 11 | 578 | 0x9b1 | -54 | 76 | 0x9b1 | -66 | 78 | 0x9b1 | -69 | 574 | 0x9b1 | -71 | 68 | 0x9b1 | -72 | 62 | 0x9b1 | -73 | 66 | 0x9b1 | -77 |
| 12 | 578 | 0x9b1 | -61 | 78 | 0x9b1 | -56 | 76 | 0x9b1 | -61 | 790 | 0x9b1 | -72 | 64 | 0x9b1 | -75 | 62 | 0x9b1 | -75 | 570 | 0x9b1 | -77 |
| 13 | 578 | 0x9b1 | -52 | 78 | 0x9b1 | -49 | 76 | 0x9b1 | -55 | 68 | 0x9b1 | -69 | 64 | 0x9b1 | -71 | 62 | 0x9b1 | -74 | 790 | 0x9b1 | -74 |
| 14 | 578 | 0x9b1 | -54 | 78 | 0x9b1 | -49 | 76 | 0x9b1 | -61 | 790 | 0x9b1 | -71 | 68 | 0x9b1 | -71 | 62 | 0x9b1 | -73 | 560 | 0x9b1 | -74 |
| 15 | 78 | 0x9b1 | -50 | 578 | 0x9b1 | -59 | 68 | 0x9b1 | -72 | 82 | 0x9b1 | -73 | 76 | 0x9b1 | -76 | 48 | 0x9b1 | -76 | 52 | 0x9b1 | -77 |
| 16 | 578 | 0x9b1 | -52 | 78 | 0x9b1 | -55 | 64 | 0x9b1 | -65 | 76 | 0x9b1 | -66 | 62 | 0x9b1 | -68 | 790 | 0x9b1 | -70 | 68 | 0x9b1 | -71 |

Table 4-2-3-1 Description of BCCH

| | |
|---|---|
| BCCH | Broadcast control channel |
| LAC | Local Area Code |
| dbm | The signal gain index, generally use negative, the signal strength is good if the amount > -80 |

## 4.3 Call history

Call history interface shows all the call records and statistics, it includes IP to GSM call history, GSM to IP call history, CDR, And also provide the interface for clearing all the call history and duration.

### 4.3.1 IP to GSM call history

Figure 4-3-1-1 IP to GSM call history

IP to GSM Call History

| Port | Call | Duration | Answered | Call Failed Caused by SIP | | | | Call Failed Caused by GSM | | | System Error |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Canceled | Timeout | Negotiation failed | Other | Busy | NO ANSWER | Error | |
| 1 | 283 | 370:59 | 282 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2 | 276 | 373:48 | 276 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 276 | 374:21 | 275 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 4 | 265 | 374:48 | 265 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 267 | 377:56 | 267 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 271 | 375:2 | 271 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 274 | 373:31 | 274 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 273 | 373:59 | 272 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | 277 | 373:6 | 277 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 270 | 373:56 | 270 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 274 | 373:40 | 273 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 12 | 273 | 374:16 | 273 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 271 | 374:18 | 269 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 14 | 266 | 373:31 | 265 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 15 | 273 | 374:38 | 273 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 272 | 374:57 | 271 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

Refresh

Table 4-3-1-1 Description of IP to GSM call history

| | |
|---|---|
| IP to GSM call history | Shows Sip VoIP calls to GSM call history (call termination) |
| Port | Numbers of GSM/CDMA ports |
| Call | Call amounts |
| Duration | All the calls accumulated duration |
| Answered | The calls amount be answered |
| Call failure caused by Sip | the amount of call failure due to the reason of SIP problem |
| Canceled | The caller side cancel calls amount |
| Timeout | The timeout failure calls amount |
| Negotiation failed | The SIP and GSM negotiation failure calls amount |
| Others | Other reasons leads to call failure calls amount |
| Call failed by GSM | The calls failed by GSM side reason amount |
| Busy | The calls failed by answer side busy reason amount |
| No answer | The calls failed by no answer reason amount |
| Error | The calls failed by error reason amount |
| System error | The calls failed by system error reason amount |

4.3.2 GSM to IP call history

Figure 4-3-2-1 IP to GSM call history

GSM to IP Call History

| Port | Call | Duration | Answered | Call Failed Caused by SIP | | | | Call Failed Caused by GSM | | System Error |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Canceled | Timeout | Negotiation failed | Other | User Canceled | Error | |
| 1 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0:0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Refresh

Table 4-3-2-1 Description of IP to GSM call history

| | |
|---|---|
| GSM to IP call history | Shows GSM to VoIP call history (call origination) |
| Port | Numbers of GSM/CDMA ports |
| Call | Call amounts |

| | |
|---|---|
| Duration | All the calls accumulated duration |
| Answered | The calls amount be answered |
| Call failure caused by Sip | the amount of call failure due to the reason of SIP problem |
| Canceled | The caller side cancel calls amount |
| Timeout | The timeout failure calls amount |
| Negotiation failed | The GSM and SIP negotiation failure calls amount |
| Others | Other reasons leads to call failure calls amount |
| Call failed by GSM | The calls failed by GSM side reason amount |
| Busy | The calls failed by answer side busy reason amount |
| No answer | The calls failed by no answer reason amount |
| Error | The calls failed by error reason amount |
| System error | The calls failed by system error reason amount |

### 4.3.3 CDR

CDR is the call details records,it records all the details of the call from which ports, call type (IP to GSM or GSM to IP), call start time, durations, caller number, callee number etc .

Figure 4-3-3-1 CDR

| Port | Call Type | Start Time | Duration(s) | Caller Num | Callee Num |
|---|---|---|---|---|---|
| 1 | Ip To Gsm | 1970/1/1 14:31:9 | 94 | 7804 | 10086#5 |
| 16 | Ip To Gsm | 1970/1/1 14:31:9 | 90 | 7801 | 10086#2 |
| 15 | Ip To Gsm | 1970/1/1 14:31:7 | 90 | 7806 | 10086#7 |
| 10 | Ip To Gsm | 1970/1/1 14:31:2 | 88 | 7815 | 10086#16 |
| 8 | Ip To Gsm | 1970/1/1 14:31:2 | 88 | 7807 | 10086#8 |
| 13 | Ip To Gsm | 1970/1/1 14:30:44 | 90 | 7808 | 10086#9 |
| 9 | Ip To Gsm | 1970/1/1 14:30:40 | 92 | 7800 | 10086#1 |
| 12 | Ip To Gsm | 1970/1/1 14:30:41 | 89 | 7812 | 10086#13 |
| 7 | Ip To Gsm | 1970/1/1 14:30:32 | 88 | 7813 | 10086#14 |
| 14 | Ip To Gsm | 1970/1/1 14:30:25 | 89 | 7805 | 10086#6 |
| 6 | Ip To Gsm | 1970/1/1 14:31:18 | 31 | 7809 | 10086#10 |
| 11 | Ip To Gsm | 1970/1/1 14:30:16 | 90 | 7803 | 10086#4 |
| 3 | Ip To Gsm | 1970/1/1 14:30:16 | 90 | 7802 | 10086#3 |
| 5 | Ip To Gsm | 1970/1/1 14:30:57 | 31 | 7811 | 10086#12 |
| 2 | Ip To Gsm | 1970/1/1 14:29:59 | 88 | 7814 | 10086#15 |
| 4 | Ip To Gsm | 1970/1/1 14:30:55 | 31 | 7810 | 10086#11 |
| 6 | Ip To Gsm | 1970/1/1 14:29:39 | 89 | 7809 | 10086#10 |
| 16 | Ip To Gsm | 1970/1/1 14:29:31 | 89 | 7804 | 10086#5 |
| 15 | Ip To Gsm | 1970/1/1 14:29:31 | 89 | 7801 | 10086#2 |
| 1 | Ip To Gsm | 1970/1/1 14:29:30 | 88 | 7806 | 10086#7 |
| 12 | Ip To Gsm | 1970/1/1 14:27:23 | 89 | 7812 | 10086#13 |
| 7 | Ip To Gsm | 1970/1/1 14:27:16 | 88 | 7813 | 10086#14 |
| 14 | Ip To Gsm | 1970/1/1 14:27:2 | 89 | 7804 | 10086#5 |
| 5 | Ip To Gsm | 1970/1/1 14:26:54 | 96 | 7815 | 10086#16 |
| 10 | Ip To Gsm | 1970/1/1 14:27:1 | 88 | 7807 | 10086#8 |
| 11 | Ip To Gsm | 1970/1/1 14:27:0 | 89 | 7811 | 10086#12 |
| 4 | Ip To Gsm | 1970/1/1 14:26:52 | 89 | 7803 | 10086#4 |

Total: 1500 entries 50 entries/page Total 30 page 1 PgUp PgDn

Download Filter

Table 4-3-3-1 Description of CDR

| | |
|---|---|
| CDR | Call details records |
| Port | Numbers of the GSM/CDMA Ports |
| Call type | Displays the call type from IP to GSM or GSM to IP. |
| Start time | The calls start time records |
| Duration(s) | Displays the calls duration (seconds) |
| Caller Num | Displays the caller ID number |
| Callee Num | Displays the callee ID number |
| Download | Click the download button to download the CDR to save in your PC to keep records, change the file name to file.csv ,then you can open it by Microsoft excel |

### 4.3.4 Clear history

Note: Click "Clear call history", it means all the records of call in and call out will be deleted

Click "Clear All Cdr",it means all Cdr will be deleted

Figure 4-3-4-1 Clear record

Clear Record
Clear Call History
Clear All Cdr
submit
NOTE: 1.Click "Clear Call history",it means all record of call in and call out will be delete

Table 4-3-4-1 Description clear record

| | |
|---|---|
| Clear record | Clear record including "Clear call history" and "Clear All Cdr" |
| Clear call history | Clear call history means all the call records will be deleted |
| Clear all CDR | Clear all CDR means all Cdr will be deleted |
| Submit | Click this button "submit" to execute |

## 4.4 Port

Port means the number of GSM/CDMA channel, We can easily setup the port parameters according to the real requirements from this interface. It has single port setting and batch ports setting for optional.

### 4.4.1 Port Setting

Figure 4-4-1 Port Setting

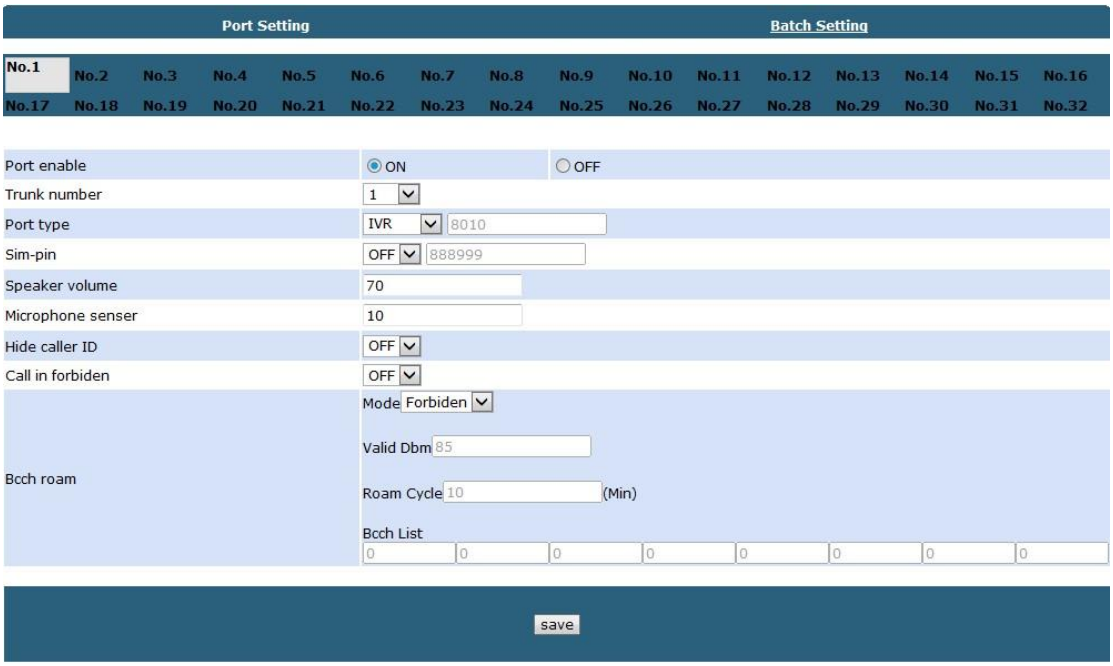



Table 4-4-1 Description of port setting

| | |
|---|---|
| Port Setting | Port setting means we set single port each time |
| Port enable | Means we can choose to open or close the port (On / Off) |
| Trunk number | To specify the Trunk to use for this port |
| Port type | Call in type: IVR or hotline for selection |
| SIM-PIN | SIM pin setting and the PIN code number to be inputted |
| Speaker Volume | To set the speaker's volume value |
| Microphone sensor | To set the microphone's sensor value |
| Hide caller ID | To hide the outgoing caller's ID ( Need carrier's support),default is off |
| Call in forbidden | To forbid call in, default is off |

| | |
|---|---|
| BCCH roam | To set BCCH roaming if you enable it on |
| Valid Dbm | To set the base station dbm value,if the value is more than this value,the base station will not accept Bcch roam, only the value is less than this value, it will roam to this base station |
| Roam cycle | To set rotate/cycle after specified minutes .e.g.10 minutes means rotate to next base station after 10 minutes. |
| BCCH list | Means you can input the BCCH list in the blank, then the base station roam will do in these BCCH list . You can get the BCCH list parameters from the Status\BCCH |
| Save | To save the setting |
| white | To permit the BCCH roam in these specified BCCH list |
| Black | To permit the BCCH roam in other BCCH list expect the specified BCCH list |

### 4.4.2 Batch setting

To do batch setting of ports, you can do the setting in one time if all the ports setting parameters are same.

Figure 4-4-2-1 Batch setting

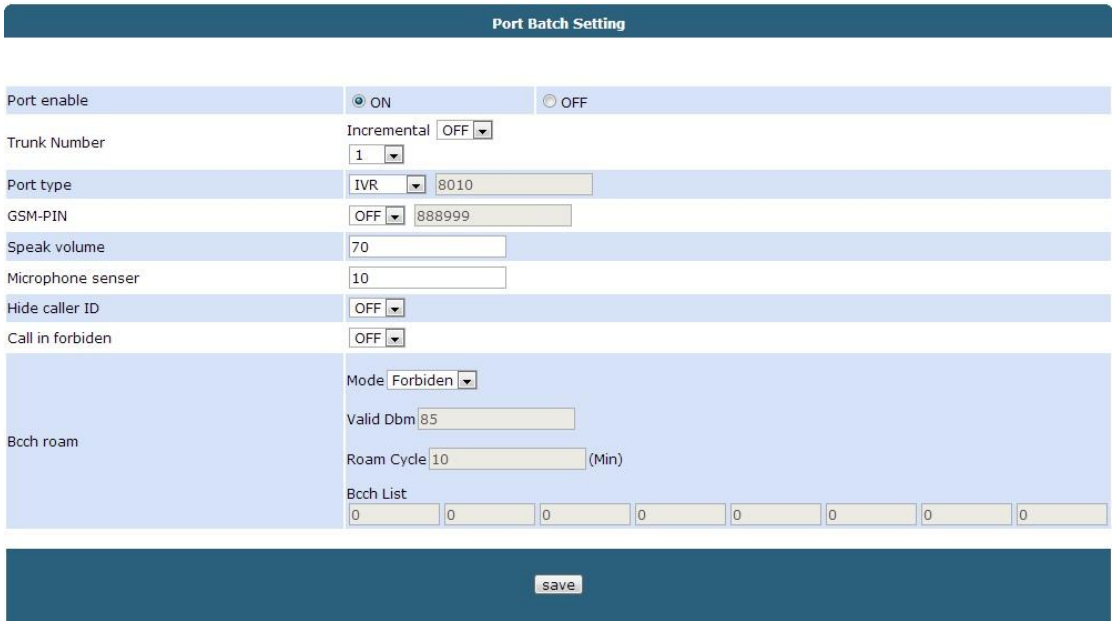



Table 4-2-2-1 Description batch setting

| | |
|---|---|
| Port batch setting | To set all the 16 ports parameters in one time |
| Port enable | Means we can choose to open or close the port (On / Off) |
| Trunk number | To specify the Trunk to use for this port |
| Port type | Call in type: IVR or hotline for selection |
| SIM-PIN | SIM pin setting and the PIN code number to be inputted |
| Speaker Volume | To set the speaker's volume value |
| Microphone sensor | To set the microphone's sensor value |
| Hide caller ID | To hide the outgoing caller's ID ( Need carrier's support),default is off |
| Call in forbidden | To forbid call in, default is off |

| | |
|---|---|
| BCCH roam | To set BCCH roaming if you enable it on |
| Valid Dbm | To set the base station dbm value,if the value is more than this value,the base station will not accept Bcch roam, only the value is less than this value, it will roam to this base station |
| Roam cycle | To set rotate/cycle after specified minutes .e.g.10 minutes means rotate to next base station after 10 minutes. |
| BCCH list | Means you can input the BCCH list in the blank, then the base station roam will do in these BCCH list . You can get the BCCH list parameters from the Status\BCCH |
| Save | To save the setting |
| white | To permit the BCCH roam in these specified BCCH list |
| Black | To permit the BCCH roam in other BCCH list expect the specified BCCH list |

## 4.5 Trunk

### 4.5.1 Trunk Setting

Trunk or IP trunk interface permits us to add remote IP of softs witch, SIP server which will send call traffics to ETS-16G gateway. In one ETS-16G GSM gateway,we can setup 1 or several trunks . User can add remote soft switch or IP server by "account" or by "peer", to realize the connection with remote soft switch or IP server.

Figure 4-5-1 Trunk setting

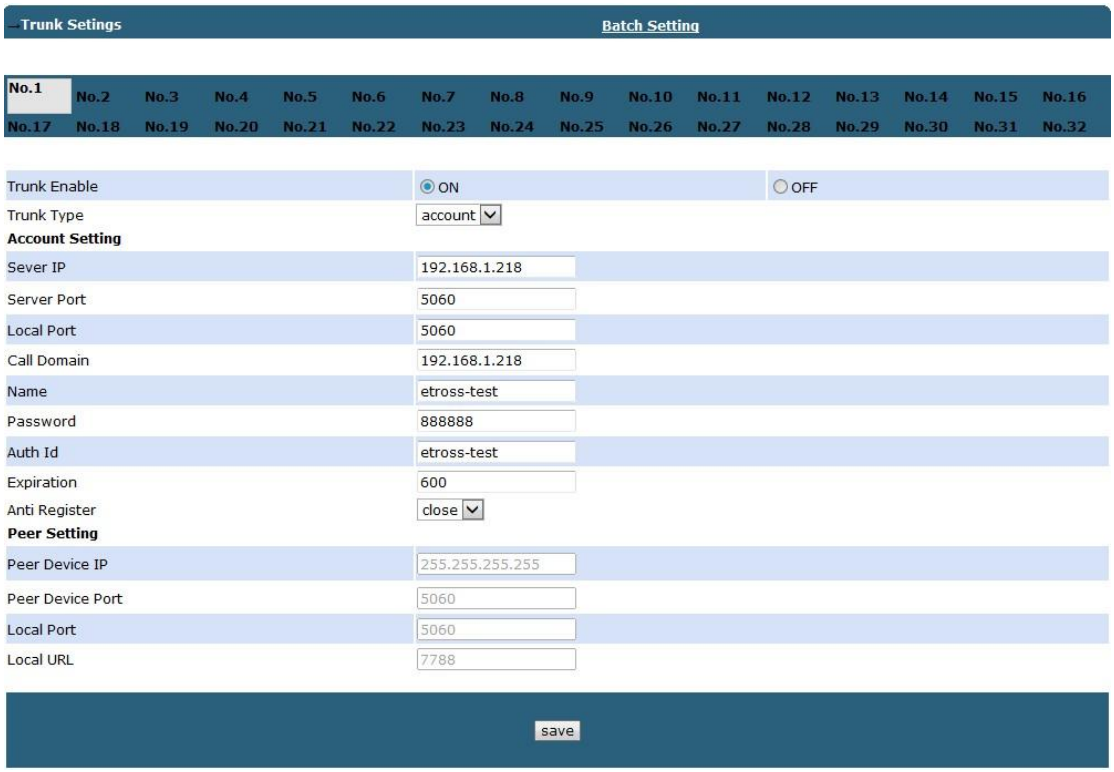



Table 4-5-1 Description of Trunk setting

| | |
|---|---|
| Trunk Setting | To set the trunk parameters |
| Trunk enable | To open (on) /Close(off) the Trunk |

| | |
|---|---|
| Account setting | Trunk type, to set with account according to SIP server or Soft switch |
| Server IP | SIP server IP address |
| Sever port | Sip server port number, default is 5060 |
| Local port | Local port number, default is 5060 |
| Call domain | Call domain setting should be same with Server IP |
| Name | Nickname of the trunk |
| Password | Authentication password registered in SIP server or soft switch |
| Auth Id | Authentication ID which registered in SIP server or Soft switch |
| Expiration | Register expiration in SIP server |
| Anti register | Anti register switch |
| Peer setting | Trunk type, to peer with SIP server of Soft switch |
| Peer device IP | It is an interworking parameter between the remote Soft switch and the SIP server. It specifies the IP address of the peer equipment. |
| Peer device port | It is an interworking parameter between the remote Soft switch and the SIP server. It specifies the SIP port number of the peer equipment. |
| Local port | Local port number, default is 5060 |
| Local URL | Local device URL address |
| Save | To save the selected parameters |

### 4.5.2 Trunk batch setting

Figure 4-5-2 Trunk Batch Setting

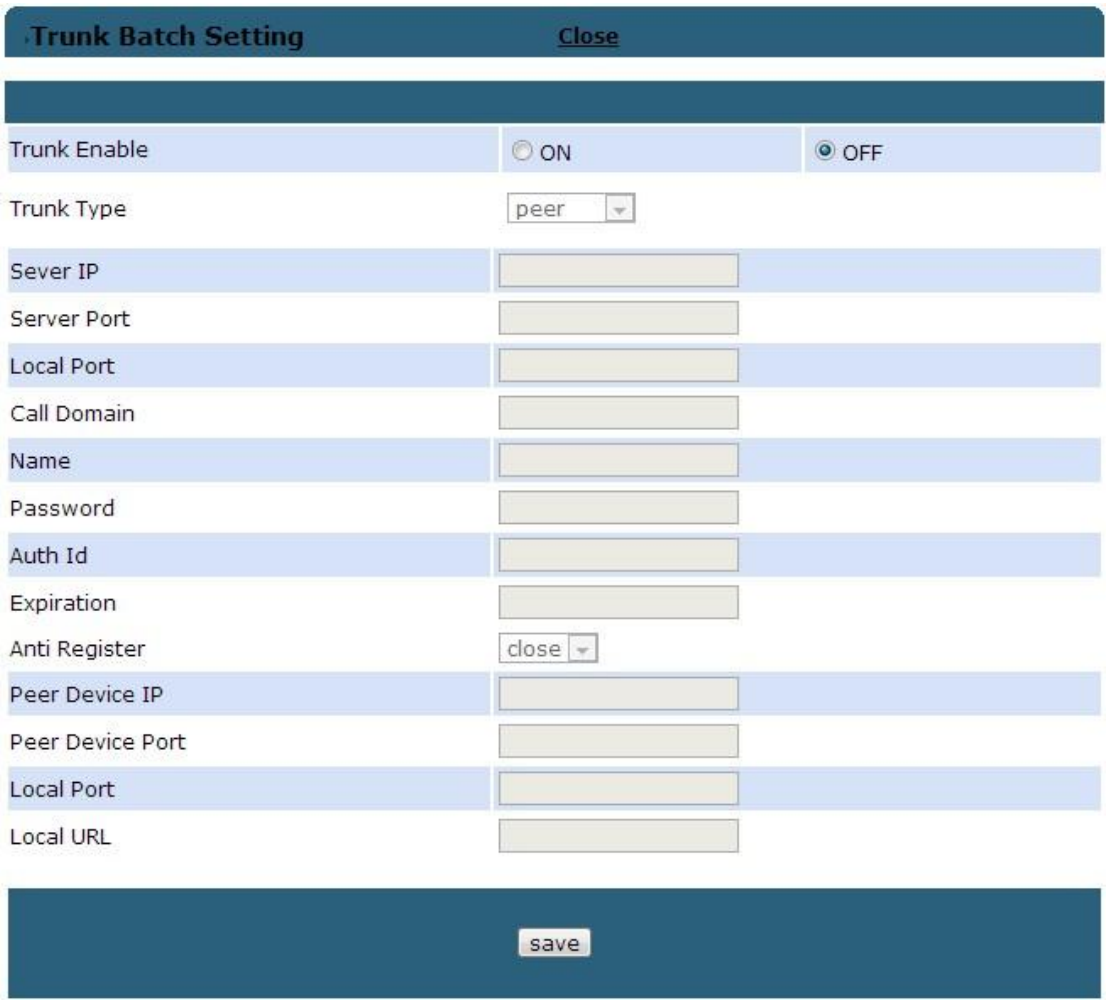



Table 4-5-2 Trunk Batch setting

| | |
|---|---|
| Trunk Batch Setting | To Batch set the trunk parameters |
| Trunk enable | To open (on) /Close(off) the Trunk |
| Account setting | Trunk type, to set with account according to SIP server or Soft switch |
| Server IP | SIP server IP address |
| Sever port | Sip server port number, default is 5060 |
| Local port | Local port number, default is 5060 |
| Call domain | Call domain setting should be same with Server IP |
| Name | Nickname of the trunk |
| Password | Authentication password registered in SIP server or soft switch |
| Auth Id | Authentication ID which registered in SIP server or Soft switch |
| Expiration | Register expiration in SIP server |
| Anti register | Anti register switch |
| Peer setting | Trunk type, to peer with SIP server of Soft switch |
| Peer device IP | It is an interworking parameter between the remote Soft switch and the SIP server. It specifies the IP address of the peer equipment. |
| Peer device port | It is an interworking parameter between the remote Soft switch and the SIP server. It specifies the SIP port number of the peer equipment. |
| Local port | Local port number, default is 5060 |
| Local URL | Local device URL address |

| | |
|---|---|
| Save | To save the selected parameters |

## 4.6 USSD

USSD (Unstructured Supplementary Service Data) is a Global System for Mobile(GSM) communication technology that is used to send text between a mobile phone and an application program in the network. Applications may include prepaid roaming or mobile chatting.

Figure 4-6-1 USSD

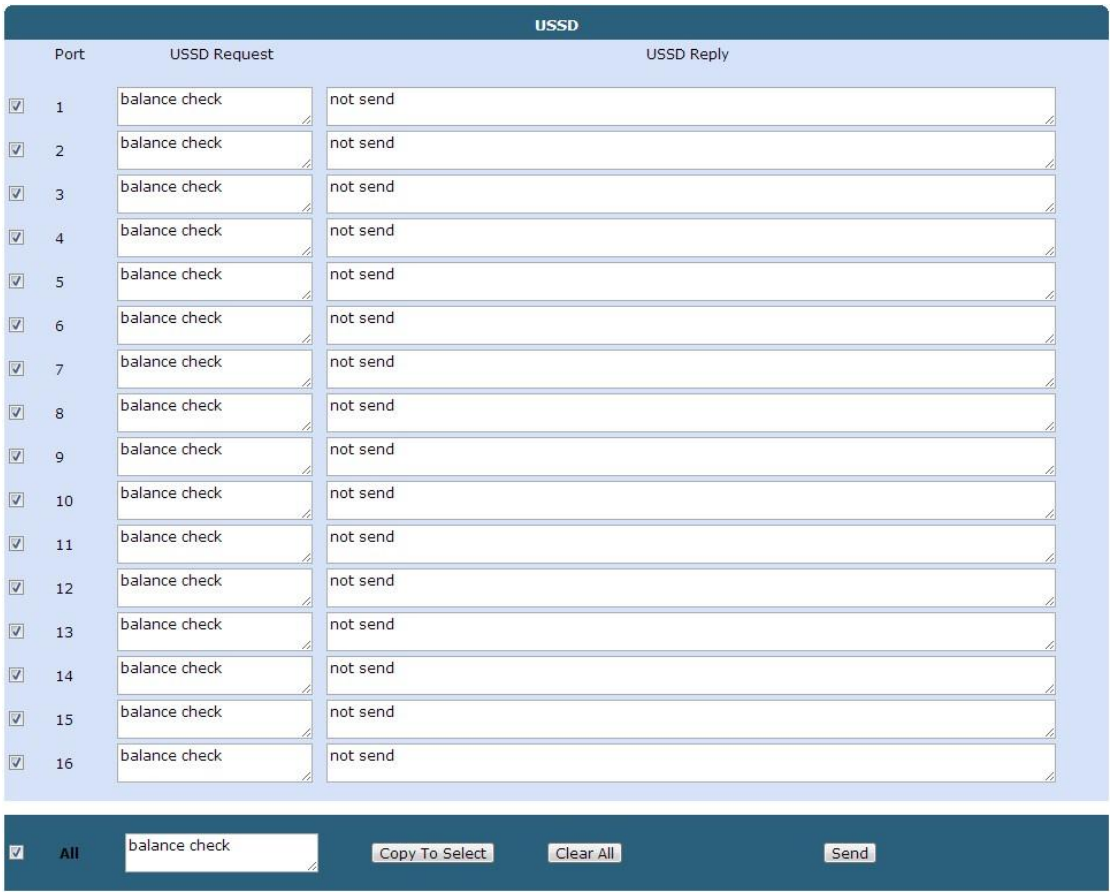
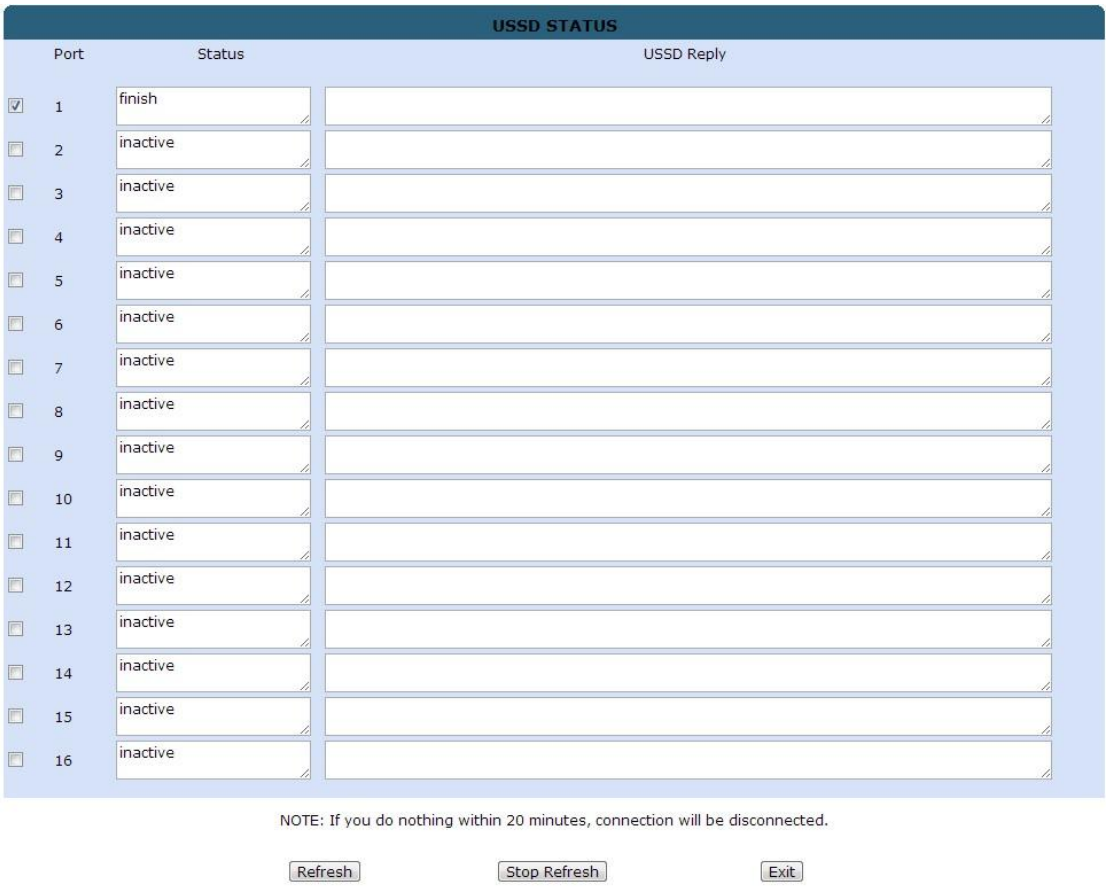



Table 4-6-1 Description of USSD

| | |
|---|---|
| Port | Select the GSM channel to send USSD |
| USSD request | Display the request info of USSD |
| USSD reply | Show the return value of USSD |
| All | Select all the GSM ports (channels) |
| Copy to select | Copy the USSD request info to selected ports |
| Clear all | Clear the USSD request or USSD reply |
| Send | Send the request info of USSD |

USSD reply information, after you click "send" ,you will get USSD reply status.

Figure 4-6-2 USSD reply status




## 4.7 Send SMS

Send SMS permit you to send SMS by ETS-16G, See as figure 4-7-1 message

Figure 4-7-1 Message

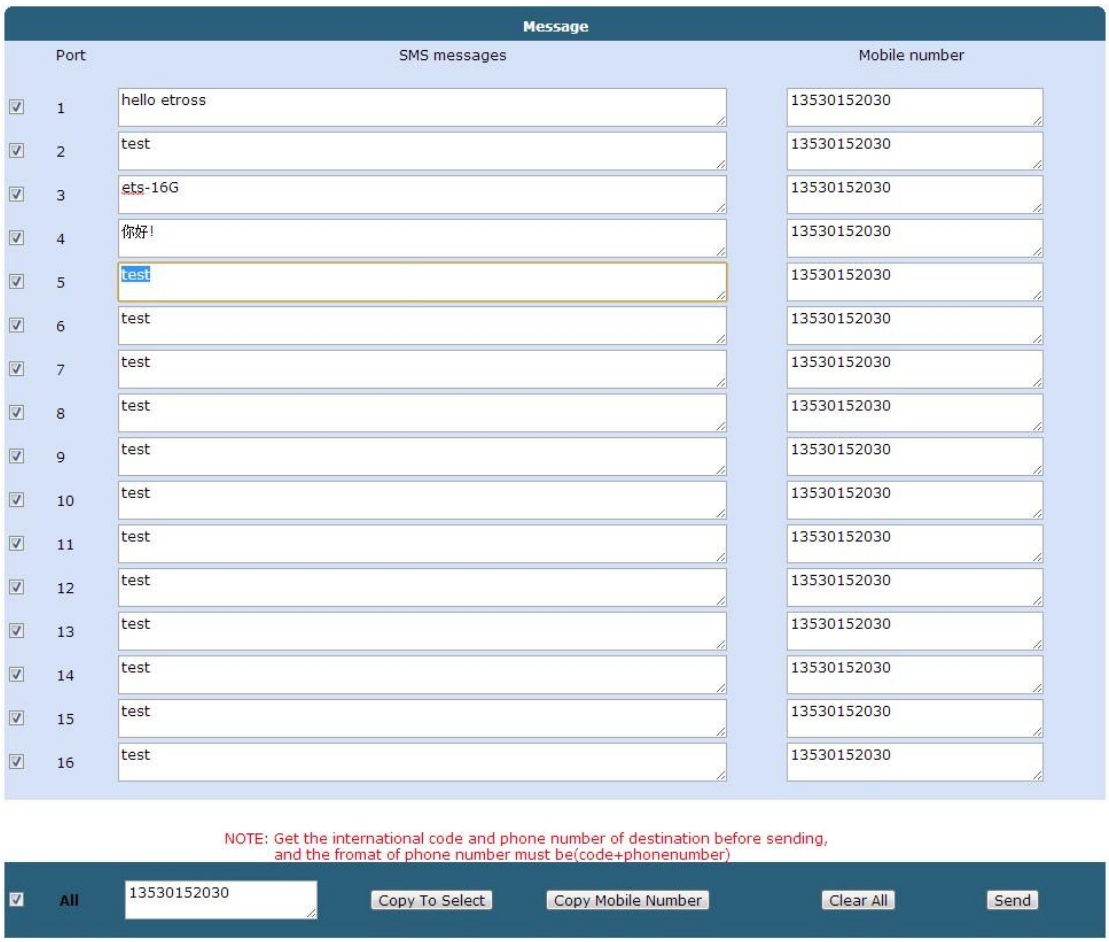
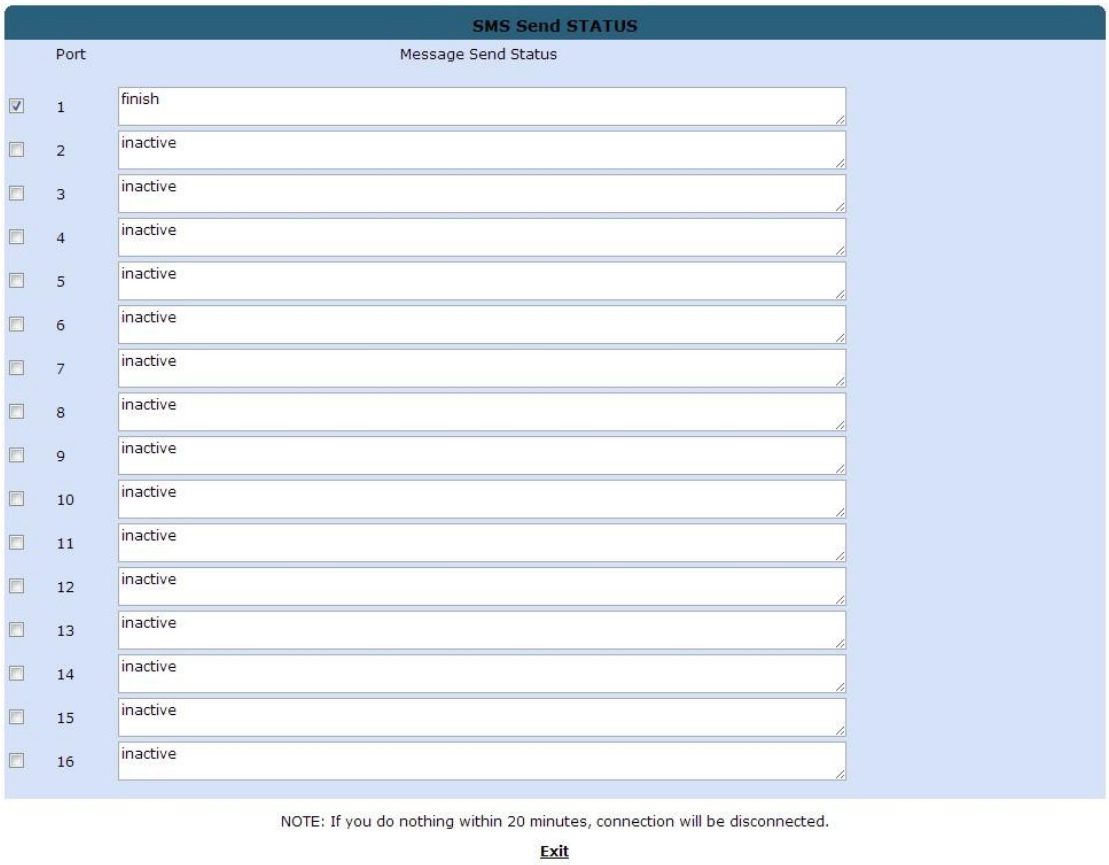



Table 4-7-1 Description of Send SMS

| | |
|---|---|
| Message | SMS |
| Port | Select the GSM channel to send SMS |
| SMS message | The content of SMS |
| Mobile number | The destination mobile phone no. Which the SMS will be sent to |
| All | Select all the GSM channels |
| Copy to select | Copy the content of SMS to selected ports |
| Copy mobile number | Copy mobile number to the selected ports |
| Clear all | Clear all the content of SMS or mobile phone numbers |
| Send | Send SMS |

SMS send status Shows the SMS Send result.if the port is not active,it shows inactive, If the SMS send successfully, then it shows "finish" ,otherwise ,it shows "fail" .

Figure 4-7-2 SMS send status




## 4.8 Receive SMS

You can send SMS to the GSM Gateway ETS-16G,it will show the SMS content when it receives. Generally receive SMS is to check the SIM balance or sim card recharge purpose in Call termination.

Figure 4-8-1 Receive message details

Recv Message Details
No.1 No.2 No.3 No.4 No.5 No.6 No.7 No.8 No.9 No.10 No.11 No.12 No.13 No.14 No.15 No.16
Index Caller ID Date,Time SMS Content
1 10086 2013/06/16 08:14:06 尊敬的客户，您2013年6月16日返还/赠送话费总金额3.00元，其中返还话费0.00元，赠送话费3.00元。当前账户可用余额为37.52
2 10086 2013/06/16 08:11:21 尊敬的客户，您于6月16日月结扣费成功，共扣套餐费6.00元，包括：主叫显示6.00元。总共还有待返还/赠送话费12.00元。中国移动广东
All
Delete
Total: 2entry 10entry/page 1/1page
Jump to 1
PgUp
PgDn

Table 4-8-1 Description of receive SMS

| | |
|---|---|
| Recv Message Details | Receive SMS detail |
| Port | Select the GSM port to show receiving SMS |
| index | The index no. Of SMS |
| Caller ID | Shows Sender's phone no. |
| Date, Time | Shows the detailed date and time |
| SMS content | Shows SMS content |
| Delete | Remove the SMS record of selected one |

## 4.9 Balance manage

### 4.9.1 Call balance manage

ETS-16G provide user the balance (credit) management function, but user has to preset the SIM card balance after its activation, attention: all the call balance use the minute as unit, not dollar, so you have to transfer it before you input data. (User can use USSD or SMS management to obtain the SIM card balance).

Figure 4-9-1 Call balance

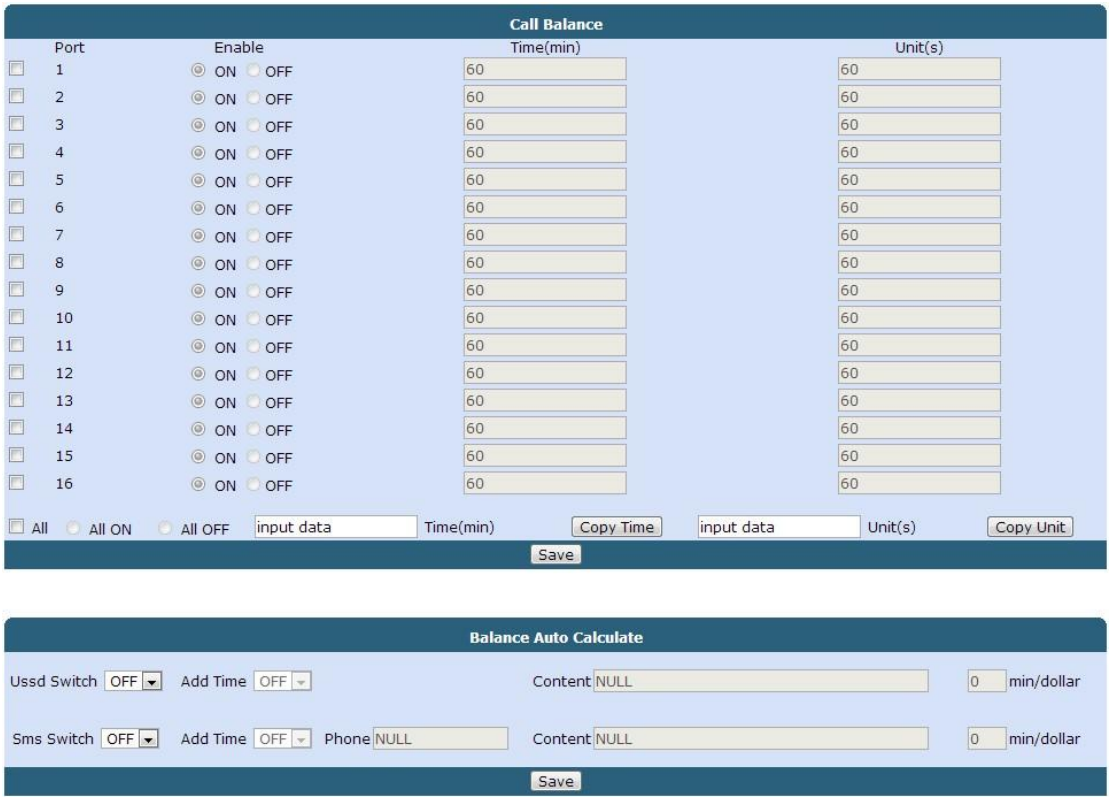


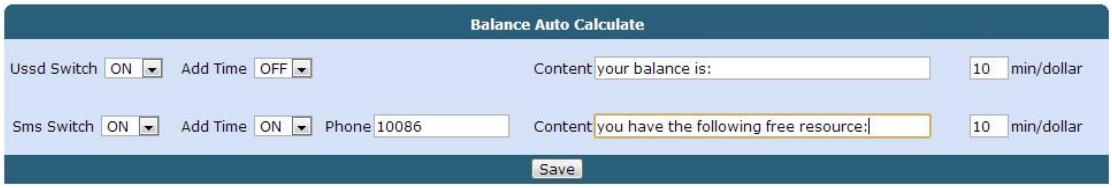

Table 4-91 Description of call balance

| | |
|---|---|
| Call balance | To show call balance |
| Port | The numbers of GSM/CDMA channels |
| Enable | To enable (on) or close (off) balance manage function |
| Time(min) | Shows the balance time (use minute as unit) |
| Unit(s) | To set unit duration( eg. 60 seconds as a unit, whether less than or equals to 60 seconds, it will bill as a unit) |
| Copy time(min) | To copy the time data to all ports in 1 time |
| Copy unit | To copy the unit data to all ports in 1 time |

### 4.9.2 Balance auto calculate

ETS-16G can realize the balance auto calculate, It can capture the key words which followed by the current real balance from the contents of USSD reply or SMS reply, if you open the USSD switch or SMS switch. And also you should fill the the data of billing rate,but you have to do the transfer (suppose in Hongkong, 0.1 HKD/minute, then it should be 10 minutes / HKD if you do the transfer). After you fill in all the data, and save the setting. The device will automatically count the call minutes and then calculate the balance , and it will show in the Status\balance.see the figure 4-9-2 balance auto calculate

Figure 4-9-2 balance auto calculate




Example:

Suppose in China, SIM card billing rate is: 0.1dollar/min, so we will transfer 1 dollar equals to 10 minutes ,So We will fill in 10 min/dollar in the blank of the rate .

If We activate the SIM card , We will use USSD to check the sim card balance. It will return the contents like: Your balance is 0.8 Dollar, See figure 4-9-3 USSD balance reply , then You can fill in the content: "Your balance is" in the blank. The system will automatically capture the 0.8 dollar after "Your balance is" and transfer it to the minutes , it may automatically refresh the balance if you open the "USSD switch" On; If you want to recharge by USSD and add time on the balance , then you should open "Add Time" switch ON, and system automatically capture the amount after the filled content and transfer to minutes, then add the minutes to the balance.

And also if the carrier may present free resource,it may send to SIM card by SMS, suppose China Mobile, it service number 10086 may send to SIM card message as "Hello! You have following free resource:3.80 Dollars to call, send SMS with network, 100 items free items for onnet sms, Thank you" , then you can fill in the content: "You have following free resource: " in the blank. The system will automatically capture the 3.80 dollar after "You have following free resource:" and transfer it to the minutes,then add the minutes to the balance. See figure 4-9-4 SMS receive details.

Figure 4-9-3 USSD balance reply

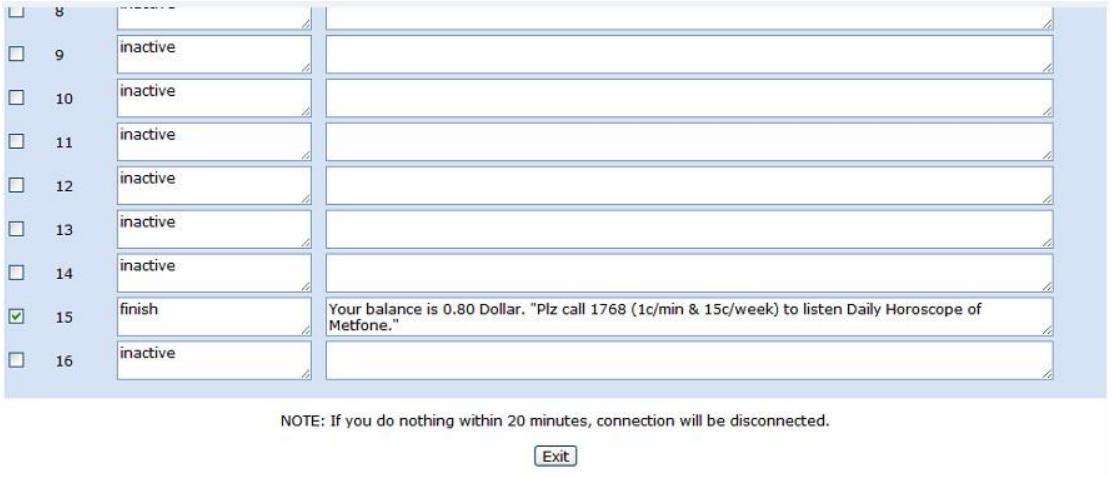
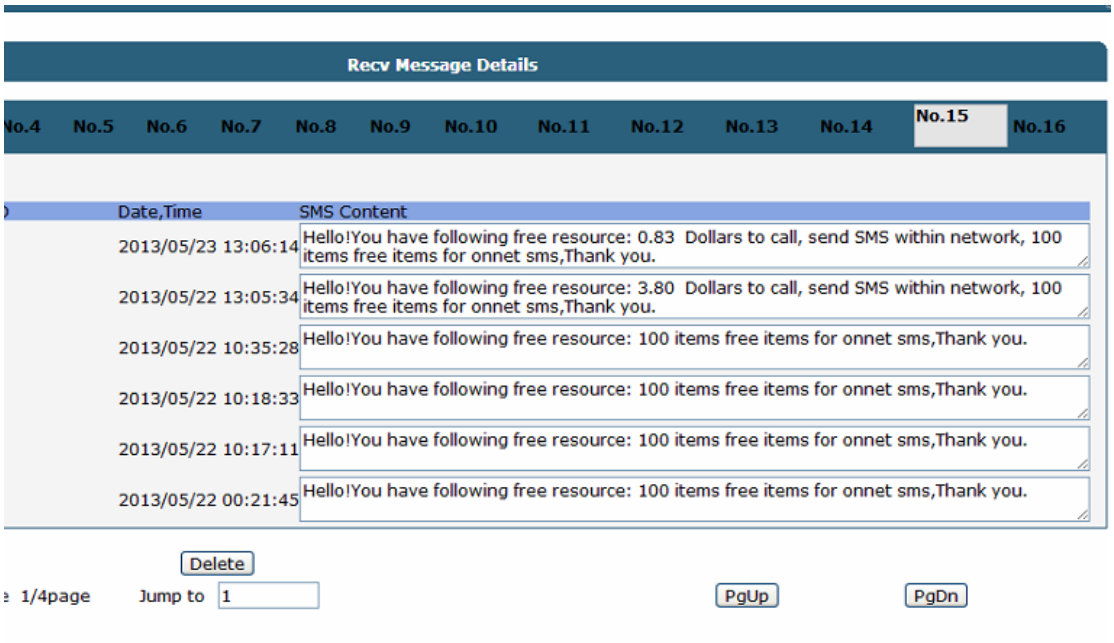

9 inactive
10 inactive
11 inactive
12 inactive
13 inactive
14 inactive
15 finish Your balance is 0.80 Dollar. "Plz call 1768 (1c/min & 15c/week) to listen Daily Horoscope of Metfone."
16 inactive
NOTE: If you do nothing within 20 minutes, connection will be disconnected.
Exit

Figure 4-9-4 SMS receive details


Recv Message Details
No.4 No.5 No.6 No.7 No.8 No.9 No.10 No.11 No.12 No.13 No.14 No.15 No.16
Date,Time
SMS Content
2013/05/23 13:06:14
Hello!You have following free resource: 0.83 Dollars to call, send SMS within network, 100 items free items for onnet sms,Thank you.
2013/05/22 13:05:34
Hello!You have following free resource: 3.80 Dollars to call, send SMS within network, 100 items free items for onnet sms,Thank you.
2013/05/22 10:35:28
Hello!You have following free resource: 100 items free items for onnet sms,Thank you.
2013/05/22 10:18:33
Hello!You have following free resource: 100 items free items for onnet sms,Thank you.
2013/05/22 10:17:11
Hello!You have following free resource: 100 items free items for onnet sms,Thank you.
2013/05/22 00:21:45
Hello!You have following free resource: 100 items free items for onnet sms,Thank you.
Delete
1/4page
Jump to 1
PgUp
PgDn

## 4.10 Call routing

4.10.1 Digit map syntax:

ETS-16G digit map supports digit (0,1,2,...9) ,"[", "]", "*" ,"-", and ",".

1. Digit:

A digit from "0" to "9"

2. Range []:

One or more Digit enclosed between square brackets ("[" and "]"), but only one can be selected

3. Star *

matches any digit ("0" to "9")

4. Subrange -

Two digits separated by hyphen ("-") which matches any digit between and including the two. The subrange construct can only be used inside a range construct, i.e., between "[" and "]".

5. Comma ,

Two digits separated by comma (",") which means this two digits matches, the comma contruct can only be used inside a range construct, i.e., between "[" and "]".

Examples:

Test_1 digit map: 12[5,6,7,8,9], port 1,2,3,4,5

means any number starts with 125,126,127,128,129 can use port 1,2,3,4,5

Test_2 digit map:13[0-2] , port 11,12

Means any numbers starts with 130,131,132 can use port 11, port 12

Test_3 digit map: *[1-5,8,9], port 14,15,16

Means any numbers starts with first digit (0,1,2,3,4,5,6,7,8,9) and second digit (1,2,3,4,5,8 or 9) will use port 14,15,16.

Figure 4-10-1 call routing configuration

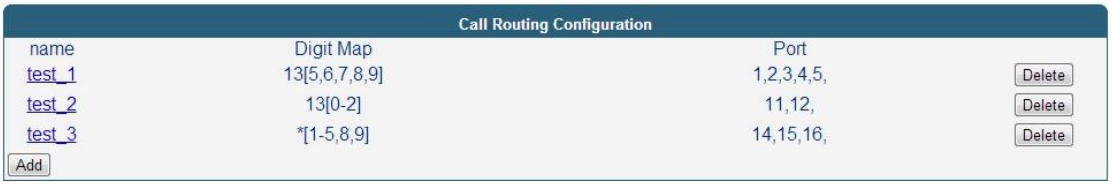
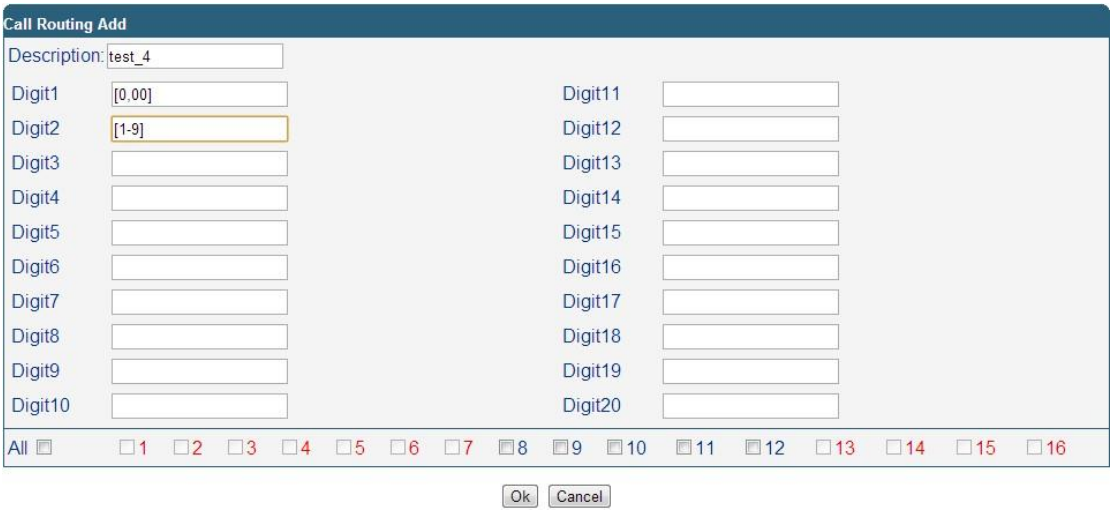



Figure 4-10-2 Call routing add




## 4.11 System

### 4.11.1 System Configuration

System configuration describes WAN & LAN configuration, Voice Codec, DTMF parameter setting and time setting

1, Wan configuration

Wan configuration can be done by 3 methods, 1) Static IP , 2) DHCP , 3) PPPoE . The user can do Wan configuration according to the real need .

Figure 4-11-1 System configuration

Table 4-11-1 Description of system configuration

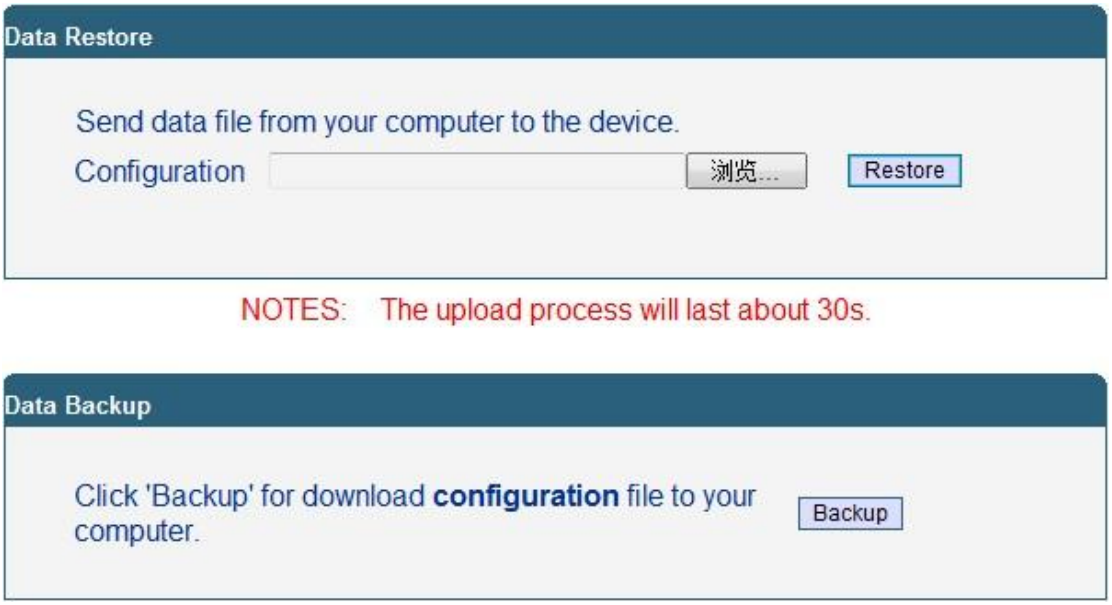
| | |
|---|---|
| Static | Means use static IP, to configure static IP address, static gateway, and Netmask manually |
| DHCP | Dynamic Host Configuration Protocol, means to obtain IP address automatically |
| PPPoE | Need ISP offer the account and password. Use this mode when there is not router in the local network |
| Obtain DNS Server Address Automatically | When enable the WAN port option of "Obtain DNS Server Address Automatically" , which will be enabled subsequently. |
| Use the Following DNS Server Addresses | Fill in the IP address of "Primary DNS Server" and "Secondary DNS Server" |
| Voice codec | Codec list for selection |
| DTMF parameter | To set the DTMF parameter, it should be same with the SIP server |
| Time setting | To set the system time |

### 4.11.2 Back up & restore

To click "backup" to download configuration file to your computer.

To click "restore" to send saved data from computer to the device ETS-16G

Figure 4-11-2 Back up & restore




### 4.11.3 Reset & Reboot

Reset to default means to restore to factory setting.

Reboot means to power off then power on the device again.

Figure 4-11-3 Reset & Reboot

### 4.11.4 upgrade firmware

The user can upgrade firmware from this file upload interface.

Note: After uploading, the device will auto restart to take effect.

Figure 4-11-4 File Upload

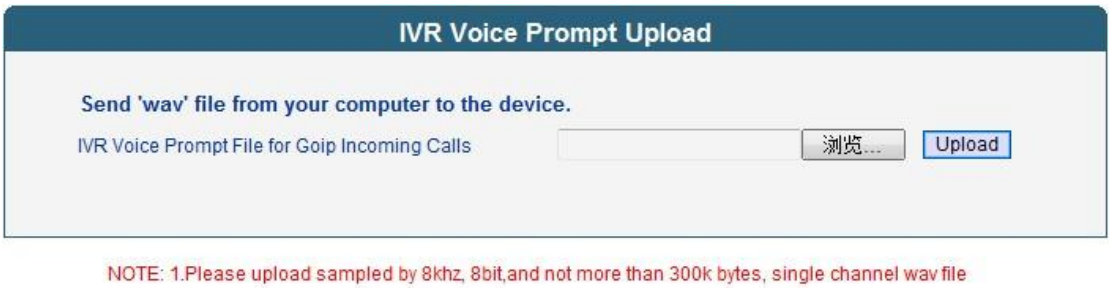
File Upload
Send package file from your computer to the device.
Software
浏览...
Upload
NOTE: After uploading, the device will auto restart to take effect.

### 4.11.5 IVR Voice upload

When call in to the SIM card of the ETS-16G, the system will pay IVR if you choose the port

type(call in) is IVR , also the user cal upload custom IVR.

Figure 4-11-5 IVR voice prompt upload


IVR Voice Prompt Upload
Send 'wav' file from your computer to the device.
IVR Voice Prompt File for Goip Incoming Calls
浏览...
Upload
NOTE: 1.Please upload sampled by 8khz, 8bit,and not more than 300k bytes, single channel wav file

Note: The IVR sound formate is 8kHz , with Wav format, and the size can not exceed 300k bytes

### 4.11.6 Username & Password

Users can change the user's name and password to enter into the web configuration,it is also strongly recommended to change the password, but please do remember the password. The default username & password: admin / admin

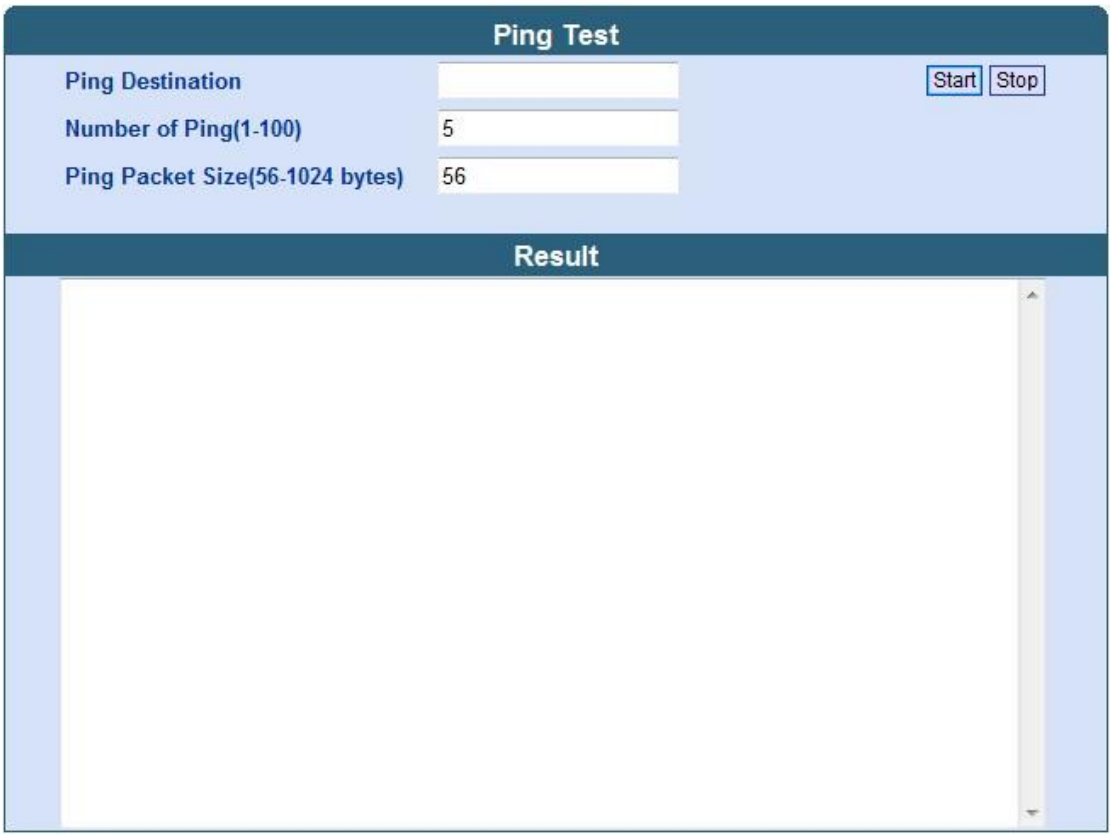
Figure 4-11-6 username & password

## 4.12 Tools

### 4.12.1 Ping Test

Ping is usually used to test the reach ability of a host on an Internet Protocol (IP) network and to measure the round-trip time for messages sent from the originating host to a destination host.

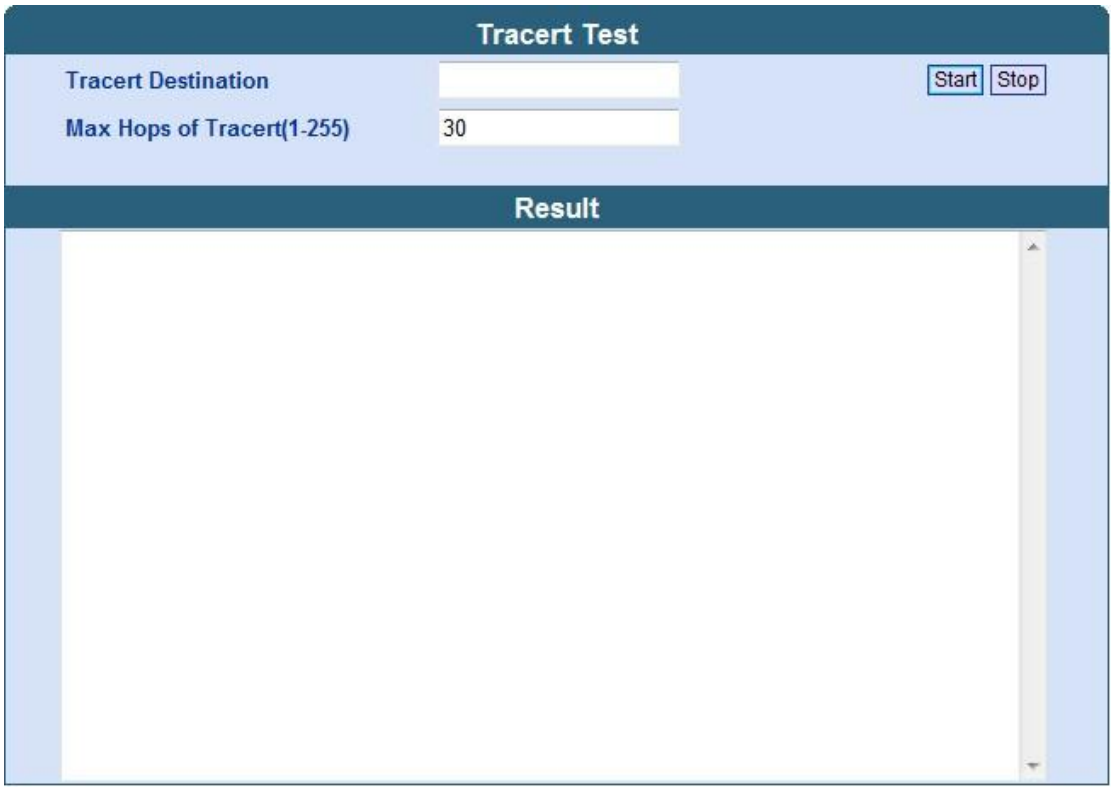
Figure 4-12-1 Ping Test




### 4.12.2 Tracert Test

Tracert is a computer network diagnostic tool for displaying the route (path) and measuring transit delays of packets across an Internet Protocol (IP) network.

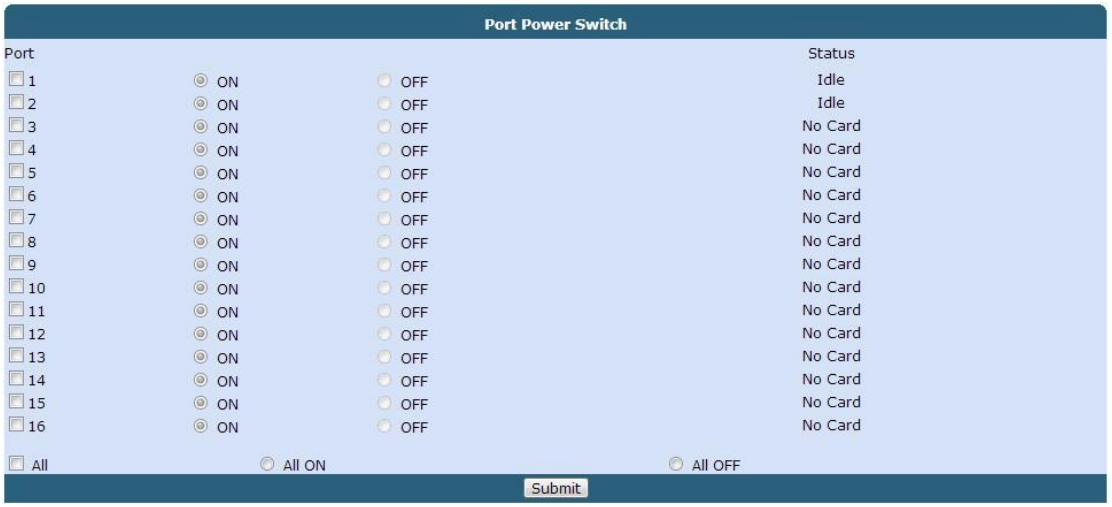
Figure 4-12-2 Tracert test




## 4.12.3 Port Power manage

Port power manage permits user to open(On) or close(Off) the port power supply, so user can change SIM card or do other operations without re boot the device.

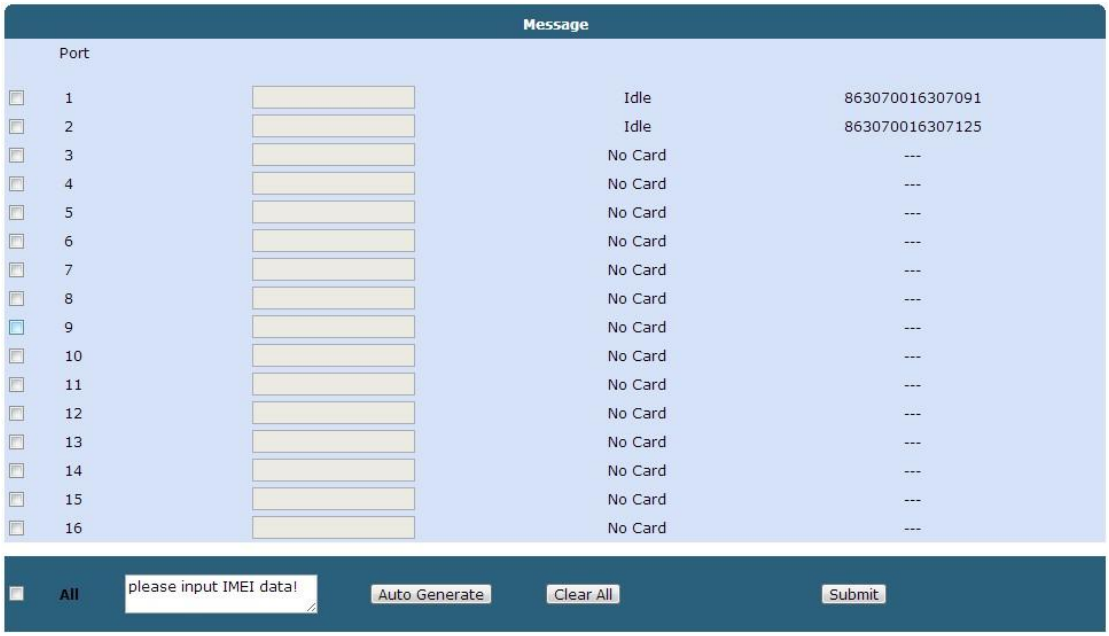
Figure 4-12-3 Port power switch




## 4.12.4 Change IMEI

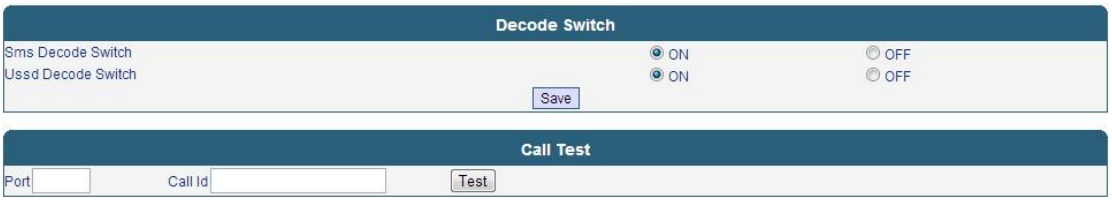
Due to the carrier's block, users have to change IMEI frequently, ETS-16G provide user the interface to change IMEI of the module easily. It can also auto generate the IMEI no. Very smart way to use.

Figure 4-12-4 Change IMEI




### 4.12.5 Debug

Figure 4-12-5 Debug




# 5. Glossary:

0-9

3G- refers to the third generation of mobile telephony that supports high-speed data transfer and is primarily suitable for mobile Internet.

A

ACD- The Average Call Duration (ACD) is calculated by taking the sum of billable seconds (bill second) of answered calls and dividing it by the number of these answered calls.

ASR- Answer Seizure Ratio is a measure of network quality . Its calculated by taking the number of successfully answered calls and dividing by the total number of calls attempted. Since busy signals and other rejections by the called number count as call failures, the ASR value can vary depending on user behavior.

B

BCCH- The Broadcast Control Channel (BCCH) is a logical broadcast channel used by the base station in a GSM network to send information about the identity of the network. This

information is used by a mobile station to get access to the network.

C

CDMA- Code Division Multiple Access

CDR- Call data records

CODEC- Coder-Decoder

D

DTMF- Dual Tone Multi Frequency

DHCP- Dynamic Host Configuration Protocol

G

GSM- Global System for Mobile Communications

GPRS- General Packet Radio Service

I

IMEI- International Mobile Equipment Identity

IMSI- International Mobile Subscriber Identification Number

IVR- Interactive Voice Response

L

LAN- Local Area Network

M

MAC- Media Access Control

P

PDD- Post Dial Delay

PSTN- Public Switched Telephone Network

S

SIM- Subscriber Identity Module

SIP- Session Initiation Protocol

SMS-Short Message Service

U

USB- Universal Serial BUS

USSD- Unstructured Supplementary Service Data

UMTS- Universal Mobile Telecommunications System

V

VLAN- Virtual Local Area Network

VPN- Virtual Private Network

W

WAN- Wide Area Network , Ethernet Interface,10/100M Base-TX, RJ-45 to connect with external network